3(9) SOV/26-59-5-27/47

AUTHOR: Znamenskiy, Yu.P., Leningrad

TITLE: Underwater Observations to Assist Science

PERIODICAL: Priroda, 1959, Nr 5, pp 102 - 106 (USSR)

ABSTRACT: The author refers to the submarine laboratory equipped by the Vsesoyuznyy nauchno-issledovatel'skiy institut morskogo rybnogo khozyaystva i okeanografii (All Union Institute for Scientific Research in Sea Fisheries and Oceanography) (VNIRO). It was installed in a converted submarine of the Soviet Navy and is now equipped with instruments for collecting samples of sea water and sea beds, with hydrolocators, underwater TV sets, searchlights, photographic and cinema installations. The author considers that this laboratory cannot completely replace the work of individual research. The latter, as a profession and trade, has been known for 2,000 years in the Mediterranean and

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Underwater Observations to Assist Science

in the East, but modern equipment has enabled individual research to be carried out at a depth greater than 30 m and for periods of several hours, instead of minutes. In the Sektsiya podvodnogo plavaniya Leningradskogo voyenno-morskogo kluba (Underwater Swimming Section of the Leningrad Naval Club of DOSAAF) a number of enthusiasts are developing underwater exploration as a sport. Some of the more outstanding members are: Designers Yu.N. Pozdnyakov and S.N. Korshunov; Mechanics P.L. Stepanov and N.M. Ginzburg (designed an underwater rifle); V.I. Kebkalo and Yu.V. Vasil'yev (constructed underwater cameras). A similar section was formed at the Moskovskiy gosudarstvennyy universitet (Moscow State University). Among the better-known apparatuses there are: "Underwater DOSAAF-1" and "Underwater DOSAAF-2" ("Podvodnik-DOSAAF-1", "Podvodnik DOSAAF-2"). Another apparatus "Ukraina" was constructed by A.S. Gnamm. These apparatuses and

Underwater Observations to Assist Science

other underwater devices are going into mass production. The author describes extensive research at fisheries, the filming of archaeological discoveries made underwater in all parts of the world, including the USSR sections of the Black and Baltic Seas, Caspian Sea, Sea of Azov, Aral Sea, and in the Pacific. There are 3 photographs and 10 Soviet references.

Card 3/3

ZNAMENSKIY, Yu.P (Leningrad)

"Conquest of the deep" by M.N.Diomidov, A.N.Dmitriev. Reviewed by IU.P.Znamenskii. Priroda no.6:120 Je '60. (MIRA 13:6)

(Oceanographic research)
(Diomidov, M.N.) (Dmitriev, A.N.)

ZNAMENSKIY, Yu. P.

ZNAMENSKIY, Yu.P. (Leningrad).

"Science and life on the screen." Nauka i zhizn' 24 no.10:50 O '57.
(Motion pictures, Documentary) (MLRA 10:11)

ZNAMENSKIY, Yu.P. (Leningrad)

"To the amateur photographer and tourist" by K.V. Vendrovskii, B.I. Zhutovskii. Reviewed by IU.P. Znamenskii. Priroda 51 no.7:91 Jl '62. (MIRA 15:9)

(Nature photography) (Vendrovskii, K.V.)
(Zhutovskii, B.I.)

ZNAMENSKIY, Yu.P. (Leningrad)

Footsteps of life. Priroda 52 no.7:120-122 Jl '63. (MIRA 16:8)
(Motion pictures, Documentary) (Biology--Audio-visual aids)

ZNAMENSKIY, Yu.P. (Leningrad)

"From silent to panoramic motion pictures" by E.M.Goldovskii. Reviewed by Iu.P.Znamenskii. Priroda 50 no.11:59 N '61. (MIRA 14:10)

(Motion picture) (Goldovskii, E.M.)

ZNAMENSKIY, Yu.P., (Leningrad)

Conditioned reflexes and the training of animals in motion pictures and on a circus arena. Priroda 52 no.9:36-44 '63. (MIRA 16:11)

ZNAMENSKIY, Yu.P. (Leningrad)

Discovery of the sixth continent; survey of literature on underwater swimming and exploration. Priroda 50 no.7:122 Jl '61.
(MIRA 14:6)

(Diving, Submarine)

ZNAMENSKIY, Yu.P.

Motion picture "A story of prefabricated reinforced concrete."
Politekh.obuch. no.6:86-87 Je '57. (MIRA 12:4)
(Motion pictures, Documentary)

ZNAMENSKIY, Yu.P. (Leningrad)

Underwater observations serve science. Priroda 48 no.5:102-106 My '59. (MIRA 12:5)
(Diving, Submarine)

ZNAMENSKIY, Yu.P.

Motion pictures and technical education . Politekh. obuch. no.1:40-45 Ja '58. (MIRA 10:12)
(Motion pictures in education) (Technical education)

GOL'DBERG, N.A.; ZNAMENSKIY, Yu.D

Nitridation kinetics of calcium carbide. Dokl. AN SSSR 120 no. 1:148-150 My-Je '58. (MIRA 11:7)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut azotnoy promyshlennosti. Predstavleno akademikom S.I.Vol'fkovichem.
(Calcium carbide)
(Case hardening)

ZHAMENSKIY, Yu. D.

GOL'DBERG, N.A.; ZHAMENSKIY, Yu.D.

Nitration kinetics of calcium carbide as related to granulometric composition. Dokl. AN SSSR 110 no.6: 1048-1052 O '56. (MLRA 10:2)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut azotnoy promyshlennosti. Predstavleno akademikom S.I. Vol'fkovichem.
(Calcium carbide) (Nitration)

ZNAMENSKIY, Yu.P., nauchnyy rabotnik.

Marine algae. Nauka i pered.op. v sel'khoz. 7 no.8:38-39 '57.
(MLRA 10:9)

(Algae)

ZNAMENSKIY, Yu. P.

AUTHOR: Znamenskiy, Yu.P. (Leningrad) 25-10-22/41

TITLE: "Science and Life on the Screen" ("Nauka i Zhizn' na ekrane")

PERIODICAL: Nauka i Zhizn', 1957, # 10, p 50 (USSR)

ABSTRACT: The film section of the Leningrad House of Scientists imeni M. Gor'kiy of the USSR Academy of Sciences started to issue a film almanac "Nauka i zhizn' na ekrane". The authors are Leningrad film amateurs. Filming for the almanac is done by the amateurs with 16 mm film cameras on reversible films. Very soon amateur sound moving pictures will be possible by applying to the film a magnetic layer. The sound is reproduced by a tape recorder head installed in the film projector.

A new narrow film camera "KIEV-16-C-2" has been produced for film amateurs. Its weight is 1,? kg; the length of one film amounts to 15 m; its two installed objectives can be used alternatively; filming can be done at a rate of 16, 24, 32, 48 and 64 frames per second.

There is one photograph.

AVAILABLE: Library of Congress

Card 1/1

AUTHOR: Znamenskiy, Yu.P. (Leningrad) SOV-25-58-9-39/52

TITLE: Submarine Agriculture (Podvodnoye zemledeliye)

PERIODICAL: Nauka i zhizn', 1958, Nr 9, p 68 (USSR)

ABSTRACT: The utilization of different sea weeds in various branches of industry is described. Laminariaceae and rockweeds are widely used as food for livestock. Some weed species are used in industry as raw material from which alcohol, alginates, ethers and acetic acid are extracted. From the agar-bearing weeds, agar-agar and "6-atom spirit" (mannite) are extracted. Rockweeds are used as a stabilizer of drilling fluids in the drilling of oil wells. The addition of these weeds keeps the boring bits from becoming clay encrusted.

1. Aquatic plants--Applications

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ZHAMENSKIY, Yu.P. (Ukhta, Komi ASSR)

Fresh-water pearls. Priroda 44 no.8:109-110 Ag '55. (MLRA 8:10)
(Pearl fisheries)

ZNAMENSKIY, Yu.P. (gorod Ukhta Komi ASSR).

Young naturalists of the far North. Est.v shkole no.2:83-84 Mr-Ap '54. (MLRA 7:3)
(Russia, Northern--Vegetable gardening)
(Vegetable gardening--Russia, Northern)

ZNAMENSKIY, Yu.P. (Leningrad)

Underwater agriculture. Nauka i zhizn' 25 no.9:68 S '58.
(Algae--Economic aspects) (MIRA 11:10)

ZNAMENSKY, M.S.; ODARYUK, T.S.

Homotransplantation of arteries based on total blood exchange to overcome tissue incompatibility. (Experimental study). Acta chir. plast. (Praha) 7 no.3:228-235 '65.

1. Department of Surgery and Regional Anatomy, Kirghiz State Medical Institute, Frunze (USSR) (Director: Prof. M.S. Znamensky.

ANTONOVSKAYA, M.A.; ZHAMENTUK, R.T.

Coordinated conference on the problem of "Mechanization and automatization of coal and other ore mine surfaces." Izv.AN SSSR.Otd.tekh.nauk.Met.i topl. no.3:149-150 My-Je '60. (MIRA 13:6)

(Mining engineering--Congresses)
(Automatic control--Congresses)

BYKHOVSKIY, Izrail' Adol'fovich. Prinimali uchastiye: AL'KIMOVICH, A.V., inzh.; YEFIMOV, K.A.; KHASIN, A.K., prof., doktor tekhn. nauk, retsenzent; ZHAMEROVSKIY, B.P., kand. tekhn. nauk, retsenzent; KUDINOV, N.N., inzh., retsenzent; MISHKEVICH, G.I., red.; SHISHKOVA, L.M., tekhn. red.

[Atomic ships] Atomnye suda. Pod red. N.N.Kudinova. Leningrad, Gos. soiuznoe izd-vo sudostroit. promyshl., 1961. 310 p. (MIRA 14:9)
(Atomic ships)

BEZUKLADOV, V.F., inzh.; ZNAMEROVSKIY, B.P., inzh.

Tuna fishing vessel. Sudostroenie 28 no.3:1-4 Mr '62.
(MIRA 15:4)

(Trawls and trawling) (Tuna fish)

VLADIMIROV, B.M.; ZNAMEROVSKIY, V.N.

Kimberlite pipe in the south of the Siberian Platform. Dokl. AN SSSR 139 no.2:438-441 Jl '61. (MIRA 14:7)

1. Vostochno-Sibirskiy geologicheskiy institut Sibirskogo otdeleniya AN SSSR. Predstavleno akademikom D.I. Shcherbakovym.
(Belaya Zima Valley--Kimberlite)

ZNAMIEROWSKA, Monika.

Neurological indications for abortion; discussion. Neur. &c. polska 7 no.2:245-253 Mar-Apr 57.

1. Z Kliniki Neurologicznej A. M. w Poznaniu Kierownik: prof dr. A. Dowzenko. Adres: Poznan, Trottgera 14 m. 4.

(NERVOUS SISTEM, in pregnancy, ther. abortion (Pol))
(ABORTION, THERAPEUTIC, in var. dis. neurol. dis. (Pol))

DOBEK, Maria; RUDNICKA, Maria; ZWAWLEROVSKA, Monika

Level of penicillin in the cerebrospinal fluid during therapy of neurosyphilis. Neur. &c. polska 6 no.3:321-328 May-June 56.

1. Z Klin. Neurolog. A.M. w Poznaniu, kier. prof. dr. A. Dowzenko. Z Zakladu Mikrobiol. A.M. w Poznaniu, kier. prof. dr. J. Adamski.

(PENICILLIN, in cerebrospinal fluid,
in ther. of neurosyphilis (Pol))
(CEREBROSPINAL FLUID,
penicillin, in ther. of neurosyphilis (Pol))
(NEUROSYPHILIS, therapy,
penicillin, retention rate in CSF (Pol))

ZNAMIEROWSKA-KOZIK, Monika

Electroencephalographic studies on genetic aspects of epilepsy. Pozn. tow. przyjac. nauk wydz. lek. 27:341-371 '64.

ZNAMIROVSCHI, V.

Determination of the H-D isotope effects by measurement of the vanadium electrode potential. Studii cerc fiz 14 no.3:233-237 '63.

1. Universitatea "Babeş-Bolyai", Cluj, Laboratorul de fizica atomica.

ZNAMIROVSCHI, V.

The H-D isotopic effects in the behavior of electrodes with palladium powder. Studii cerc fiz 15 no. 2:247-251 '64.

1. The "Babes-Bolyai" University, Cluj.

ZNAMIROVSCHI, V.

Determining the isotopic effects H-D by measuring the potential of tantalum electrode. Studii cerc fiz 13 no.5:765-773 '62.

1. Universitatea "Babes-Bolyai", Cluj.

ZNAMIROVSKIY, V.N.

Mercurial mineralization in the South of the Siberian Platform.
Dokl. AN SSSR 148 no.3:684-685 Ja '63. (MIRA 16:2)

1. Irkutskoye geologicheskoye upravleniye. Predstavleno akademikom D.I. Shcherbakovym.
(Siberian Platform—Mercury ores)

NIKLEWICZ-RODKIEWICZ, Jadwiga; ZNAMIROWSKA, Krystyna; SZWABOWICZ, Krystyna

Evaluation of the trafuril reaction in rheumatic fever in children. Reumatologia (Warsz.) 1 no.2:133-135 '63.

1. Z Wojewodzkiego Osrodka Reumatologicznego w Sopocie (Dyrektor: dr J. Titz-Kosko).

ZNAMIROWSKI J.

ZNAMIROWSKI, J.

On the margin of the art of power; a review of a play.

p. 15 (Zolnierz Polski) No. 22, Oct. 1957, Warszawa, Poland

SO: MONTHLY INDEX OF EAST EUROPEAN ACCESSIONS (EEAI) LC, VOL. 7, NO. 1, JAN. 1958

POLAND

SZTABA, Romuald and ZNAMIROWSKI, Ryszard, Clinic of Child Surgery (Klinika Chirurgii Dziecięcej) in Gdansk (Director: Assoc. Prof., Dr. med. Romuald SZTABA)

"Tuberculosis of Mesenteric Nodes and Peritoneum in Children."

Warsaw, Polski Tygodnik Lekarski, Vol 18, No 12, 18 Mar 63, pp 417-420.

Abstract: [Authors' English summary] Authors report their observations concerning 18 children with tuberculosis of the peritoneum and of the mesenteric nodes. The etiopathogenesis, signs, and treatment are reported. In only one case did the x ray examinations reveal specific changes in the lung tissue. In most cases tuberculosis of the digestive tract may be presumed. Authors stress the role of the tuberculosis of the mesenteric nodes in the abdominal pains of the children. The 18 references include 6 Polish, 7 French, 4 German, and one (1) English source.

1/1

ZNAMIROWSKI, Ryszard

Healing of traumatic lesions of the skull in children. Pol. przegl. chir. 36 no.12:1429-1435 D '64

1. Z Kliniki Chirurgii Dzieciecej Akademii Medycznej w Gdansku. (Kierownik: dr. R. Sztaba).

SZTABA, Romuald; KRYNSKI, Stefan; MOLLARET, Henri; CYNOWSKI, Lucjan; ZNAMIROWSKI, Ryszard

Pseudotuberculous infection of the mesenteric nodes in children. Pol. tyg. lek. 18 no.31:1149-1153 29 Jl '63.

1. Z Kliniki Chirurgii Dzieciecej AM w Gdansku; kierownik: dr med. R. Sztaba, z Zakladu Mikrobiologii AM w Gdansku; kierownik: prof. dr St. Krynski, z Zakladu Dzumy Instytutu Pasteura w Paryzu; kierownik: dr J. Fournier i z Zakladu Anatomii Patol. Szpitala Wojewodzkiego w Gdansku; kierownik: dr L. Cynowski.

(PASTEURELLA INFECTIONS)
(MESENTERIC LYMPHADENITIS)

SZTABA, Romuald; ZNAMIROWSKI, Ryszard

Tuberculosis of the mesenteric nodes and peritoneum in children (according to observations on our cases). Pol. tyg. lek. 18 no.12:417-420 18 Mr '63.

1. Z Kliniki Chirurgii Dzieciecej w Gdansku; kierownik: z-ca prof. dr med. Romuald Sztaba.

(TUBERCULOSIS IN CHILDHOOD)
(TUBERCULOSIS, LYMPH NODE)

ZHAMIROWSKI, Ryszard

Partial excision of the kidney in children. Polski przegl. chir. 32 no.5:459-463 My '60.

1. Z Oddzialu Chirurgii Dziecinnej Akademii Medycznej w Gdansku, Kierownik Oddzialu: z-ca prof. dr. R. Sztaba.
(NEPHRECTOMY in inf. & child)

ZNAN

Boring.

Double-shaft boring. Sila no. 3:36 Mr '52.

9. Monthly List of Russian Accessions, Library of Congress, July 1952 1953, Uncl.

S/194/62/000/004/065/105
D295/D308

AUTHORS: Varlamov, M. L., Krichevskaya, Ye. L., Manakin, G. A., Znan', A. A., Kozakova, L. M. and Zorozhek, L. S.

TITLE: Investigation of the acoustical coagulation of aerosols formed in chemical factories

PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika, no. 4, 1962, abstract 4-5-38g (V sb. Primeneniye ul'traakust. k issled. veshchestva. no. 12, M., 1960, 199-204)

TEXT: The coagulation of mists of sulphuric acid, of solutions of ammonium nitrate and nitride, of silicon-fluorhydric acid and coal-dust was investigated. Mists were precipitated in horizontal tubes of 45 mm diameter and 500 - 950 mm length, and dusts in vertical tubes. ГС-2 (GS-2) generators, with a separating membrane of thin rubber, were used for sound-irradiating the gas. Coagulation monitoring was carried out by chemical and nephelometric control methods, as well as by determining the numerical concentration of

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Investigation of the ... S/194/62/000/004/065/105
D295/D308

particles by means of the УМФ-3 (UMF-3) ultramicroscope. The concentration of H_2SO_4 mist amounted to 0.3 - 10.6 g/cm^3; at an [ir-] radiation [/] level of 153 - 155 dB for the duration of 4 - 5 sec the degree of coagulation reaches 97 - 99%. The best results were obtained at frequencies of 16 and 22 kc/s. Data were presented on coagulation of mists containing fluorine compounds. [Abstracter's note: Complete translation.]

Card 2/2

ZNANIECKI, P.

"Remarks on the Production of Pigs on Industrial Farms." p. 50,
(GOSPODARAKA MIESNA, Vol. 6, No. 2, Feb. 1954. Warszawa, Poland.)

SO: Monthly List of East European Accessions, (EEAL), LC,
Vol. 3, No. 12, Dec. 1954, Uncl.

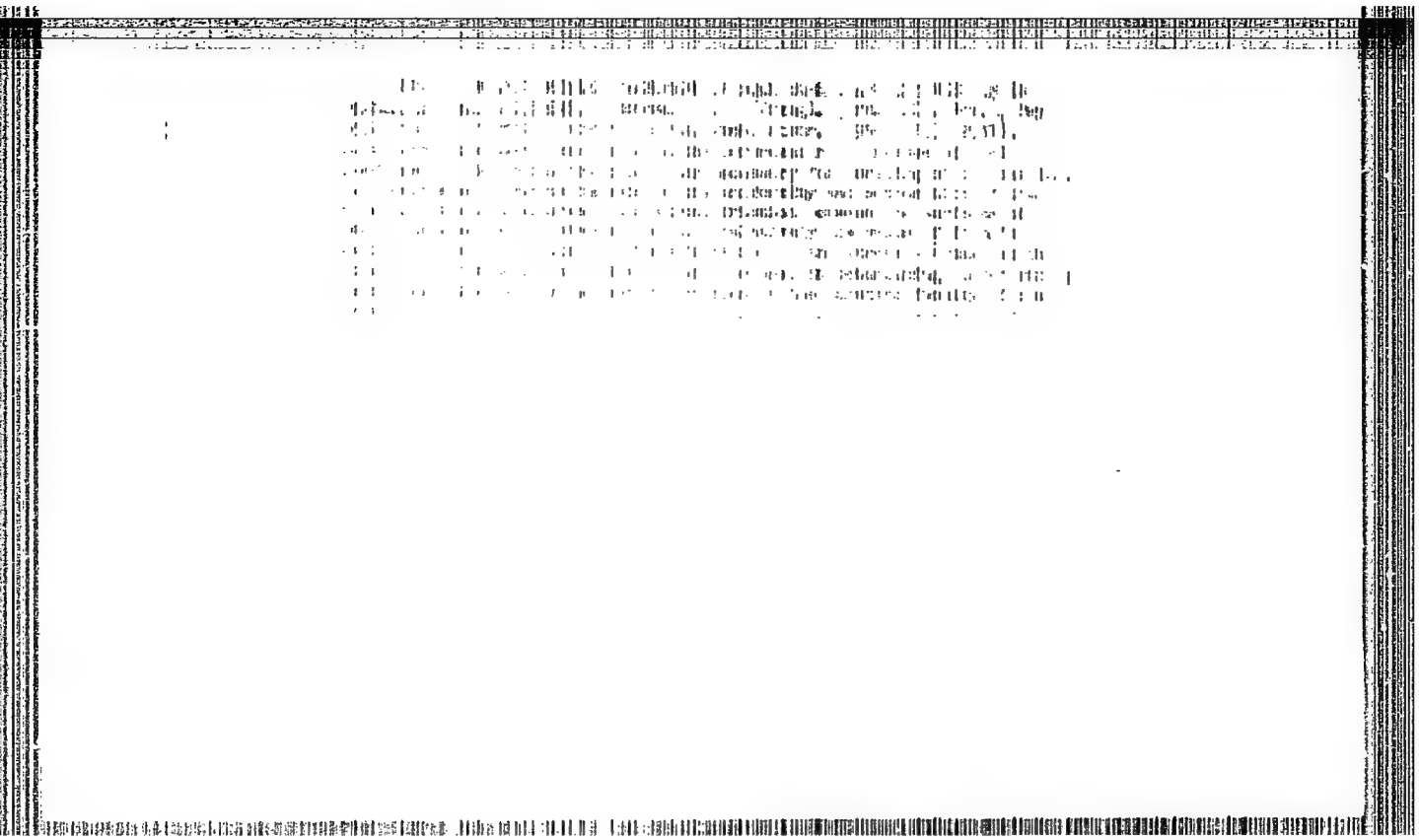
ZNAMSKI, J.

Rock bursts appearing simultaneously with earthquakes. p. 501.

PRZEGLAD GORNICZNY. (Stowarzyszenie Naukowo-Techniczne Inzynierow i Technikow Gornictwa) Katowice. Poland.
Vol. 15, no. 10/ 11, Oct./Nov. 1959.

Monthly List of East European Accessions (EEAI) LC, Vol. 9, no. 2, Feb. 1959.

Uncl.



ZNANSKI, J.

"Tendency of Rocks to Burst", P. 225, (ARCHIWUM GORNICTWA I HUTNICTWA, Vol 2, No. 2, 1954, Warszawa, Poland)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 5, May 1955, Uncl.

KORBEL, Kazimierz; PIEKARZ, Jerzy; PRZEWLOCKI, Kazimierz; ZMUDZKI, Jozef

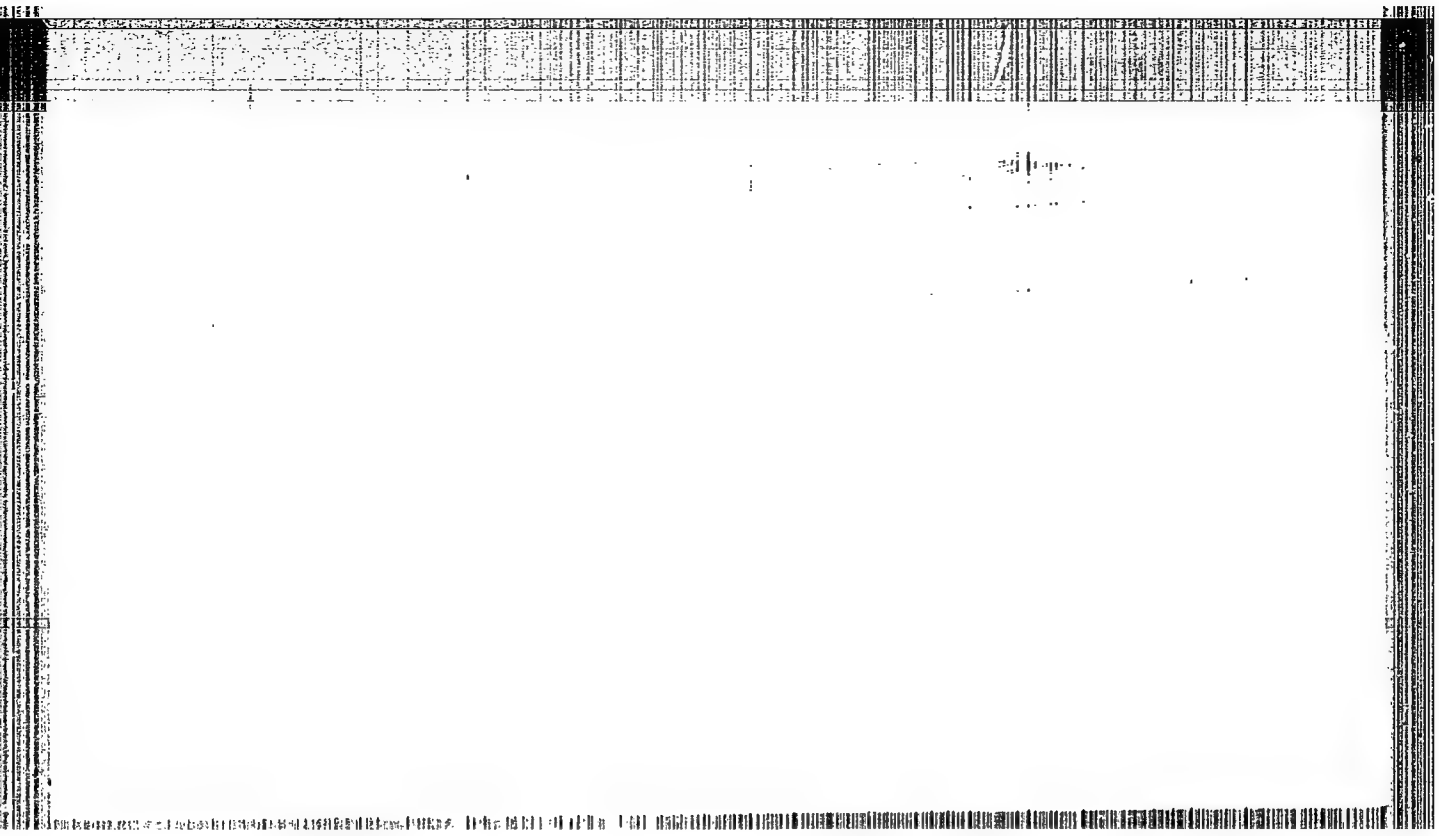
Radioisotopic measurements of flowing sand-water mixtures in pipelines by means of scintillation counters. Archiw gorn 7 no.1:49-58 '62.

ZHANSKI, J.

Short-wall system in seams liable to rock bursting.p. 205

Vol. 11, no. 6, June 1955 PRZEGLAD GORNICZY

So:MONTHLY LIST OF EAST EUROPEAN ACCESSIONS, (EEAL), LC, Vol. 4, No.9, Sept. 1955, Uncl.



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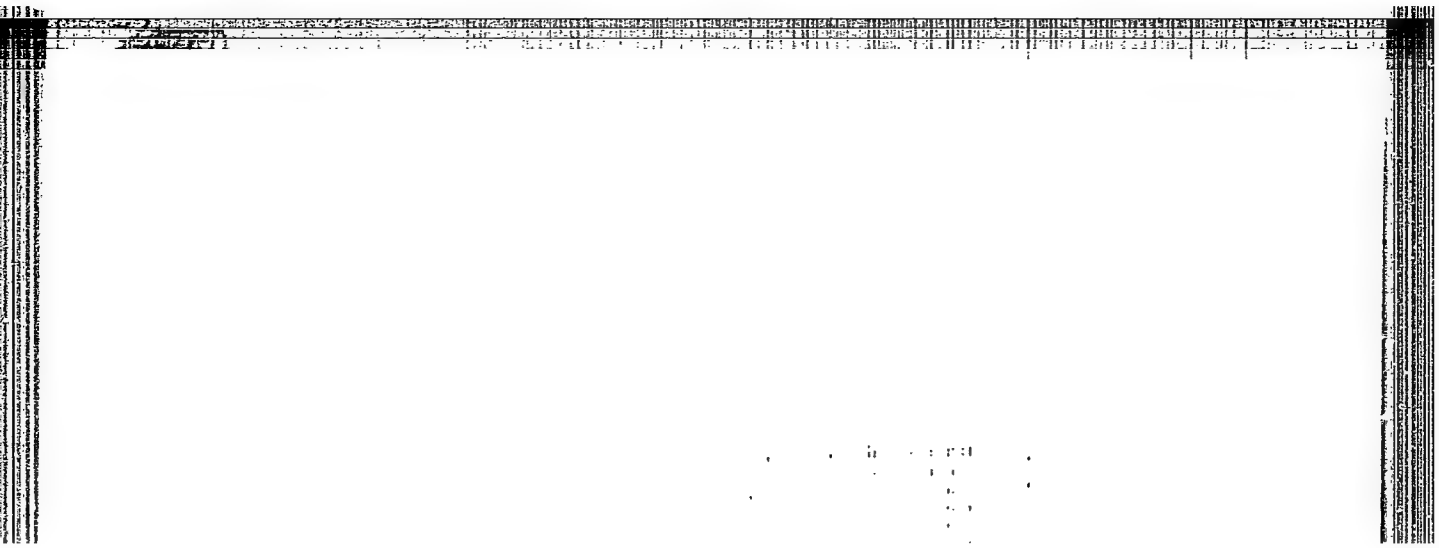
ZNANSKI, J.

Fuel Abstracts
Vol. XV, NO.2
Feb. 1954
Natural Solid
Fuels: Winning

1951. ROCK BURSTS IN LIGHT OF LABORATORY EXPERIMENTS. Znański, J. (Stalinogród: Prace Glów. Inst. Górn. (Centr. chief Inst. Min.), 1953, Ser. A, Komunik. 143, 27pp.). Coals and carboniferous rocks were compressed to discover the conditions in which elastic energy is converted into a sudden release of kinetic energy. These were found to be: close contact and high friction between sample and base of press, a uniform, dense material such as durain coal, and the development of high three dimensional stress in the sample. (L).



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ZNATKOV, S.

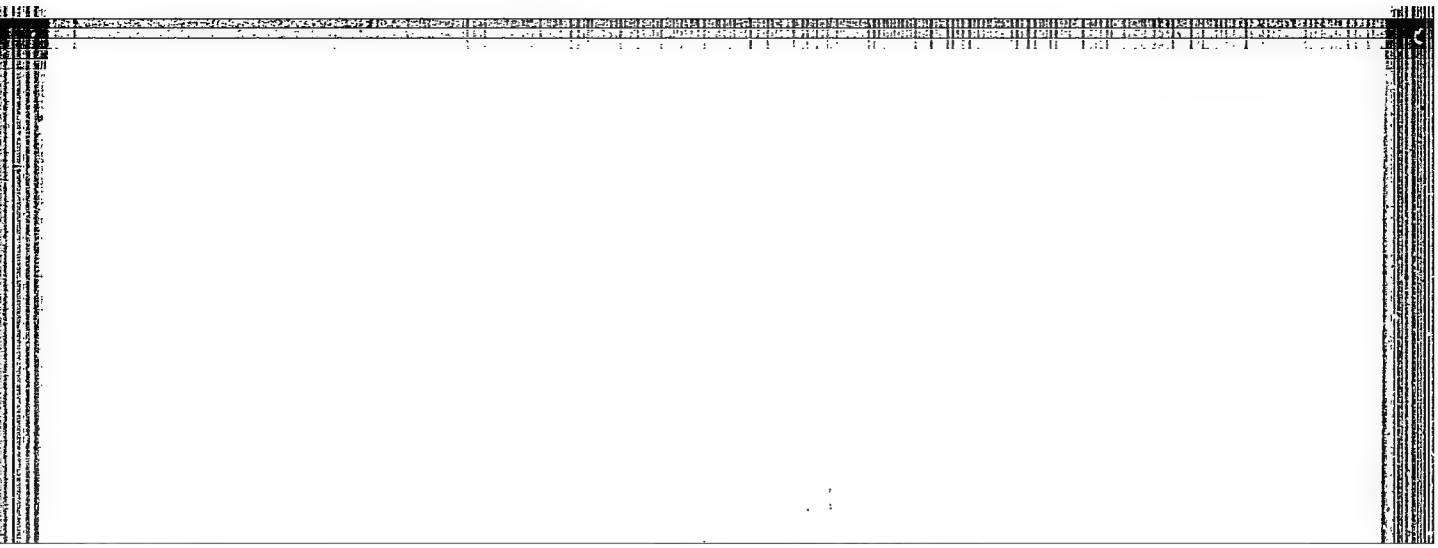
Innovators of a metal-working plant. Metallurg 7 no.7:38-39 Jl '62. (MIRA 15:7)
(Metalwork--Industrial innovations)

ZNATOKOVA, T. N.

ZNATOKOVA, T. N.

"Laws Governing Pressing and Baking of Copper-Reinforced Ceramic Goods." Inst of Physical Chemistry of Acad Sci USSR, Zhdanov Metallurgy Inst, Inst of Metallurgy of Acad Sci USSR, Moscow, 1955. (Dissertation for the Degree of Candidate in Technical Sciences)

SO:: M-955, 16 Feb 56



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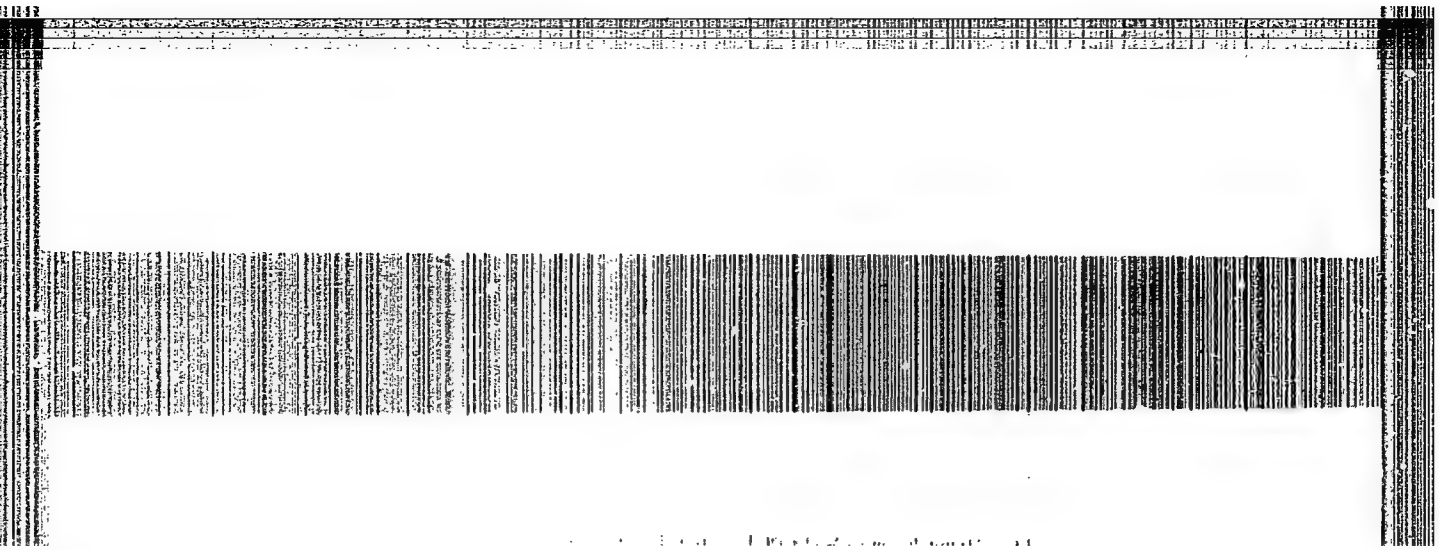


APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R002065320012-0"

NEGREYEV, V.F.; ZNAYCHENKO, S.G.; GARAYEV, Z.Sh.; SHAKHTAKHTINSKAYA, G.G.

Protecting the supports of offshore structures from corrosion in the petroleum industry. Trudy Gipromorneftі no.1:144-171 '54.
(Protective coatings)

ZNAYCHENKO, S. G.

Negreyev, V. F. and Znaychenko, S. G. "Fight against corrosion of the base openings of marine mining," Azerbaydzh. neft. khoz-vo, 1948, No. 11, p. 6-7

SO: U-3264, 10 April 53, (Letopis 'Zhurnal 'nykh Statey, No. 4, 1949).

ZNAYEVA, K. I. 191T54

USSR/Chemistry - Synthetic Pharmaceuticals Sep 51

"Synthesis of Certain Homologues of Aglucones of Cardiac Glucosides. I. Synthesis of Two Isomeric β-Phenanthryl-Δα-β-Butenolides," S. I. Khmevskaya, K. I. Znayeva, All-Union Sci Res Chemicopharm Inst imeni S. Ordzhonikidze

"Zhur Obshch Khim" Vol XXI, No 9, pp 1726-1729

In order to test physiol effect of homologues of aglucones of cardiac glucosides contg phenanthryl radical, synthesized β-(3-phenanthryl)- and β-(2-phenanthryl)-Δα-β-butenolides, which gave legal reaction like aglucones of cardiac glucosides but lacked physiol effects of latter.

191T54

BUZHEVICH,G.A., kandidat tekhnicheskikh nauk; ELINSON,M.P., kandidat tekhnicheskikh nauk

Bibliography ("Granulated blast furnace slags and slag cement." P.P.Budnikov, I.L.Znchko-IAvorskiY. Reviewed by G.A.Buzhevich, M.P.Elinzon). TSement 21 no.2:27-28 Mr-Ap'55. (MIRA 8:8)
(Slag cement) (Budnikov,P.P.) (Znachko-IAvorskii,I.L.)

ZNIDARSIC, J.

Extended activity of the Yugoslav Union of Radio Amateurs. p. 33. (Radioamater, Vol. 11, no. 2, Feb. 1957. Beograd, Yugoslavia)

SO: Monthly List of East European Accessions (REAL) LC, Vol. 6, No. 7, July 1957, Uncl.

ZNIDERSIC, BRANKO.

Prirucnik za polarno iskolcavanje prelaznih krivina u obliku klotoide. Racunski izveli Aleksandar Mararov i Jaroslav Leskosek. Beograd, Izdavacko preduzece Ministrastva gradevina FNRJ, 1949. 628 p. (Naucna gradevinska biblioteka, knj. 4)

SO: EEAL, Vol. 5, No. 7 July 1956

ZNIDERSIC, B.

ZNIDERSIC, B. Critical survey of our technical legislation governing road planning. p. 452.

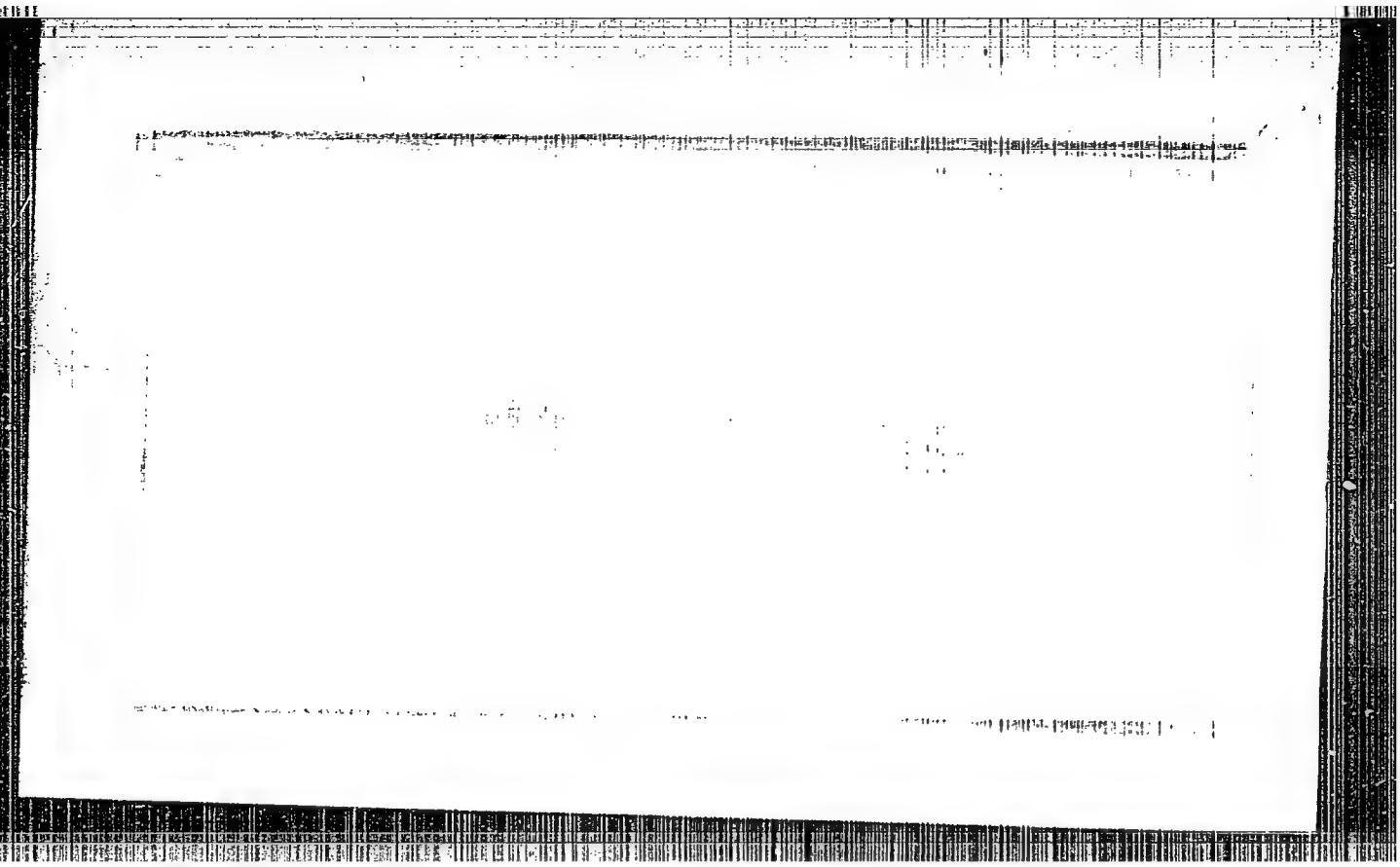
Vol. 4, No. 8/9, Aug./Sept. 1956.
CESTE I MOSTOVI
TECHNOLOGY
Zagreb, Yugoslavia

So: East European Accession, Vol. 6, No. 2, February 1957

ZWINSKI, ZENO.

Stolarstwo budowlane. (Wyd. 2.) Warszawa, Budownictwo i Architektura, (Building carpentry. 2d ed. chiefly diagrs.)
Vol. 1. 1956. 195 p.

So. East European Accessions List Vol. 5, No. 9 September 1956



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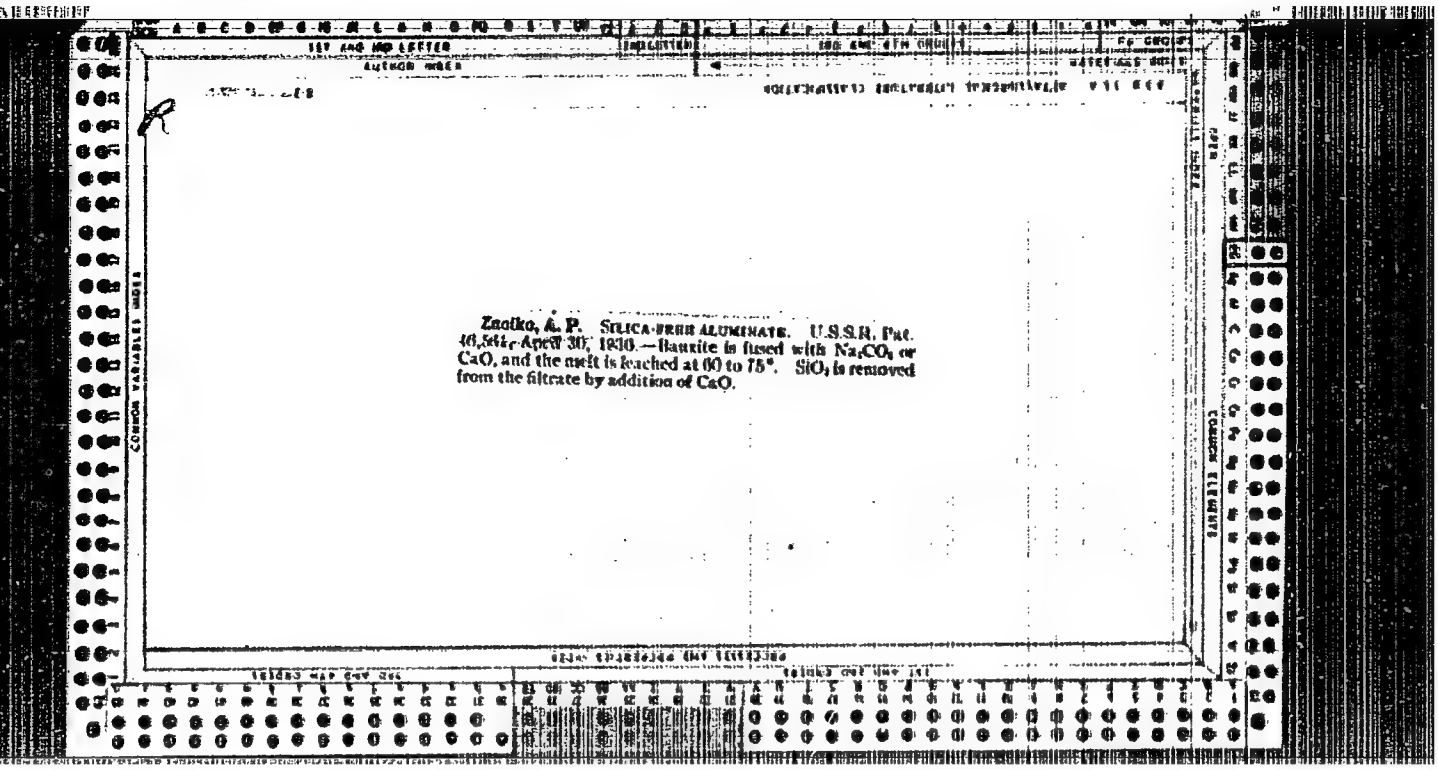
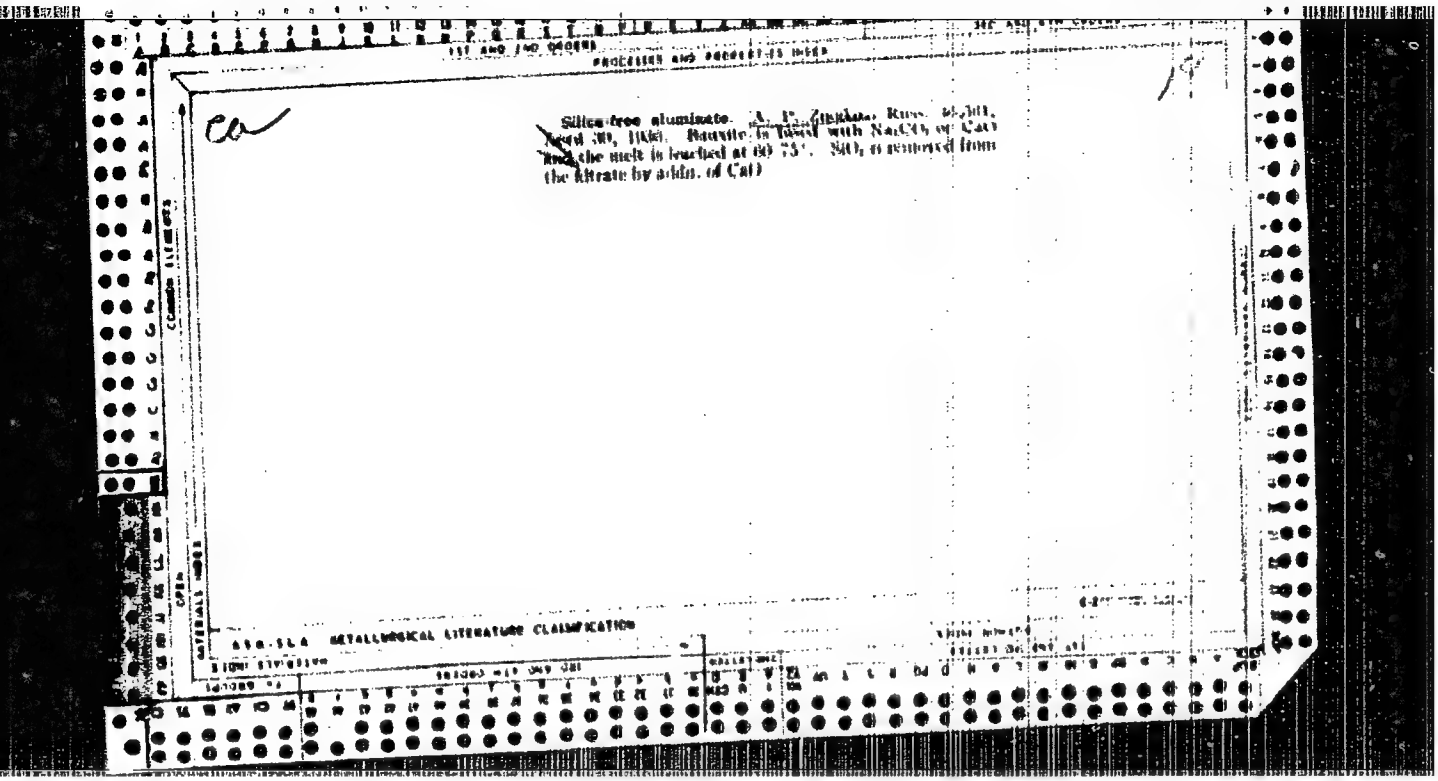
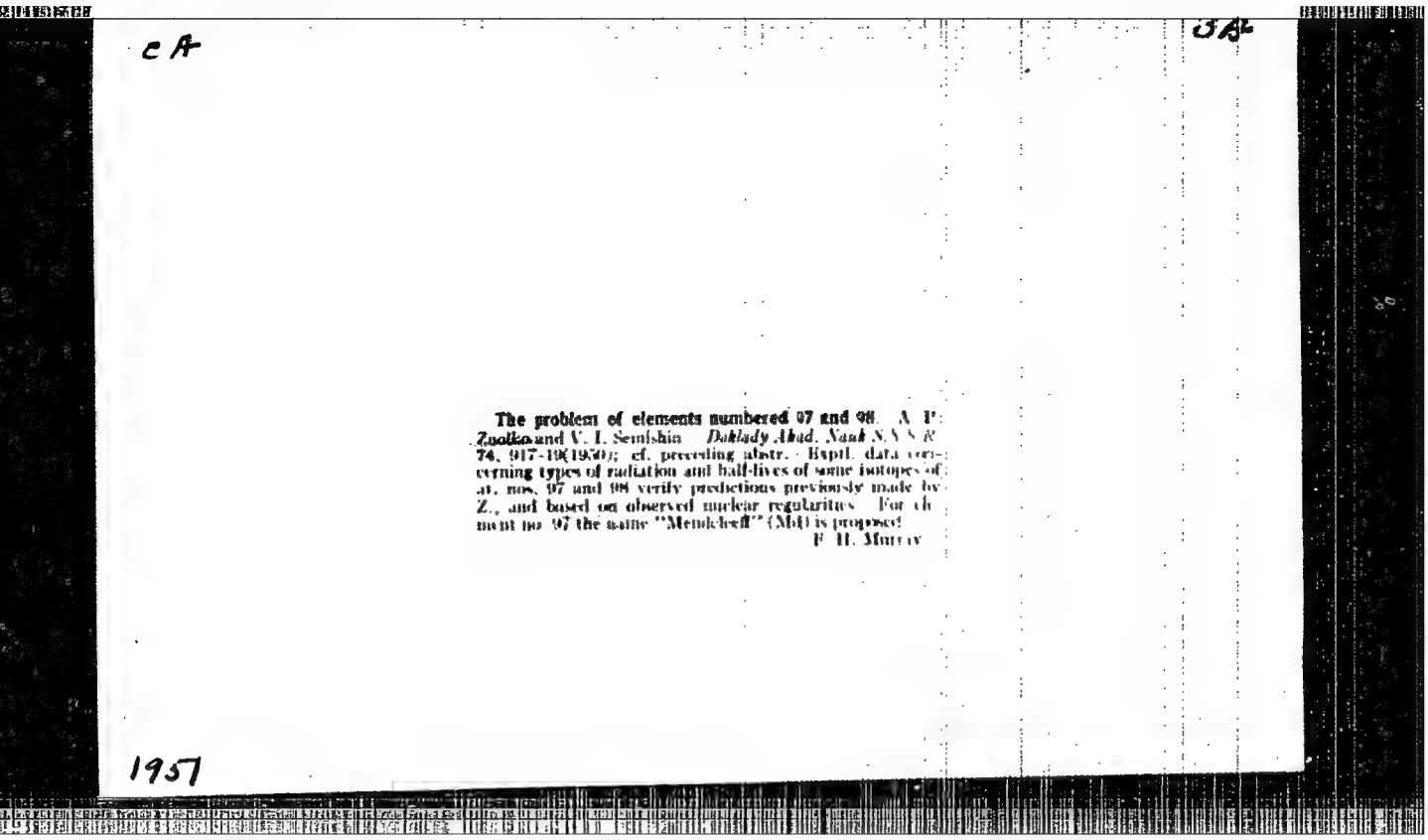


Znatko, A. P. SILICA-FREE ALUMINATE. U.S.S.R. Pat. 46,561, Apr. 30, 1936.—Bauxite is fused with Na_2CO_3 or CaO, and the melt is leached at 60 to 75°. SiO_2 is removed from the filtrate by addition of CaO.



Silica-free aluminate. A. P. Zinkina, Russ. 46,301, April 30, 1956. Bauxite is fused with Na_2CO_3 or CaO and the melt is leached at 60-75°. SiO_2 is removed from the filtrate by addn. of CaO

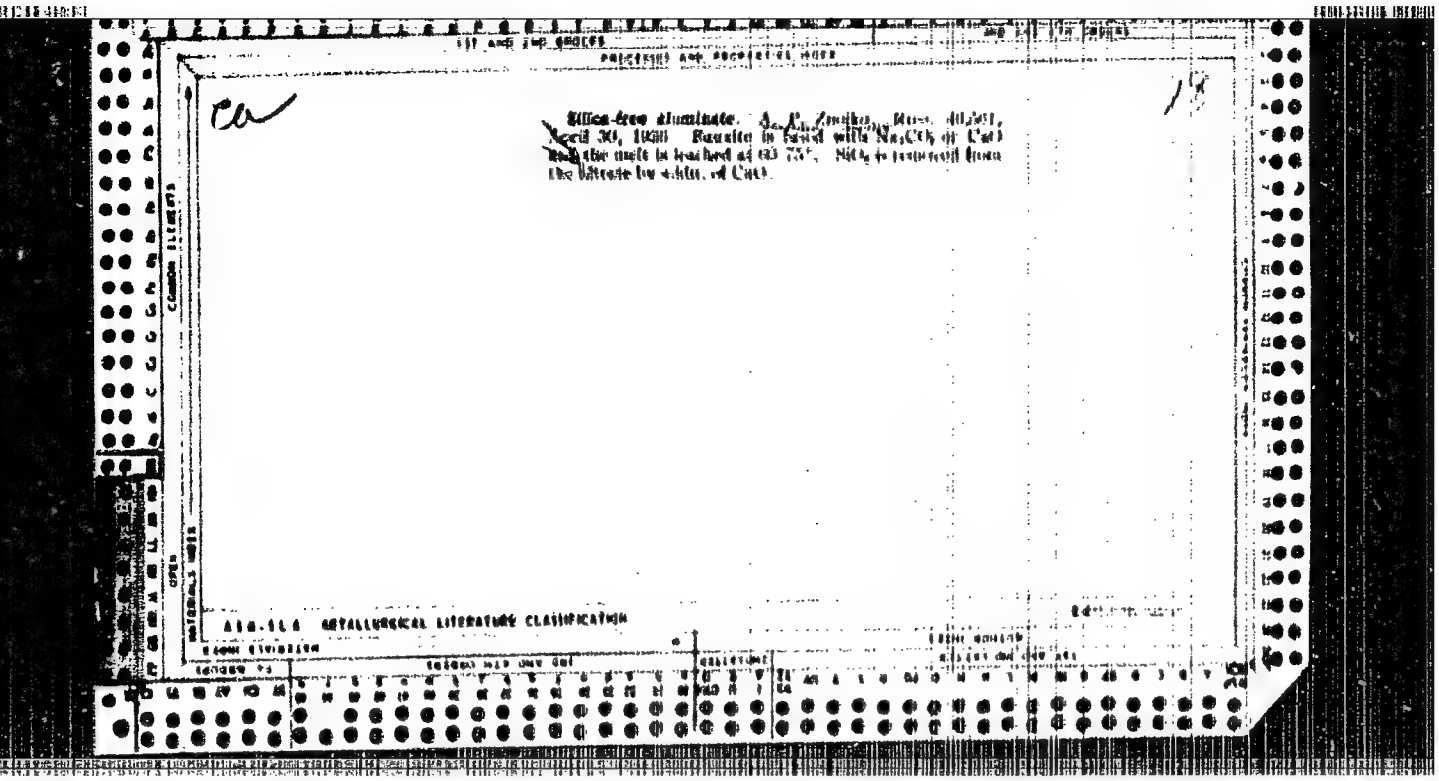


cA

3A2

The problem of elements numbered 97 and 98. A. P. Zvolka and V. I. Semishin. *Doklady Akad. Nauk S.S.S.R.* 74, 917-19(1950); cf. preceding abstr.—Rapid. data concerning types of radiation and half-lives of some isotopes of at. nos. 97 and 98 verify predictions previously made by Z., and based on observed nuclear regularities. For el. ment no. 97 the name "Mendelevil" (Mv) is proposed.
F. H. Murray

1957



Silica-free aluminate. A. P. Zenzin, Russ. 40,261, April 30, 1950. Bauxite is fused with Na_2CO_3 or CaO and the melt is leached at 95-75°. $NaOH$ is recovered from the filtrate by addn. of CaO.

A58.514 METALLURGICAL LITERATURE CLASSIFICATION

CA 3A

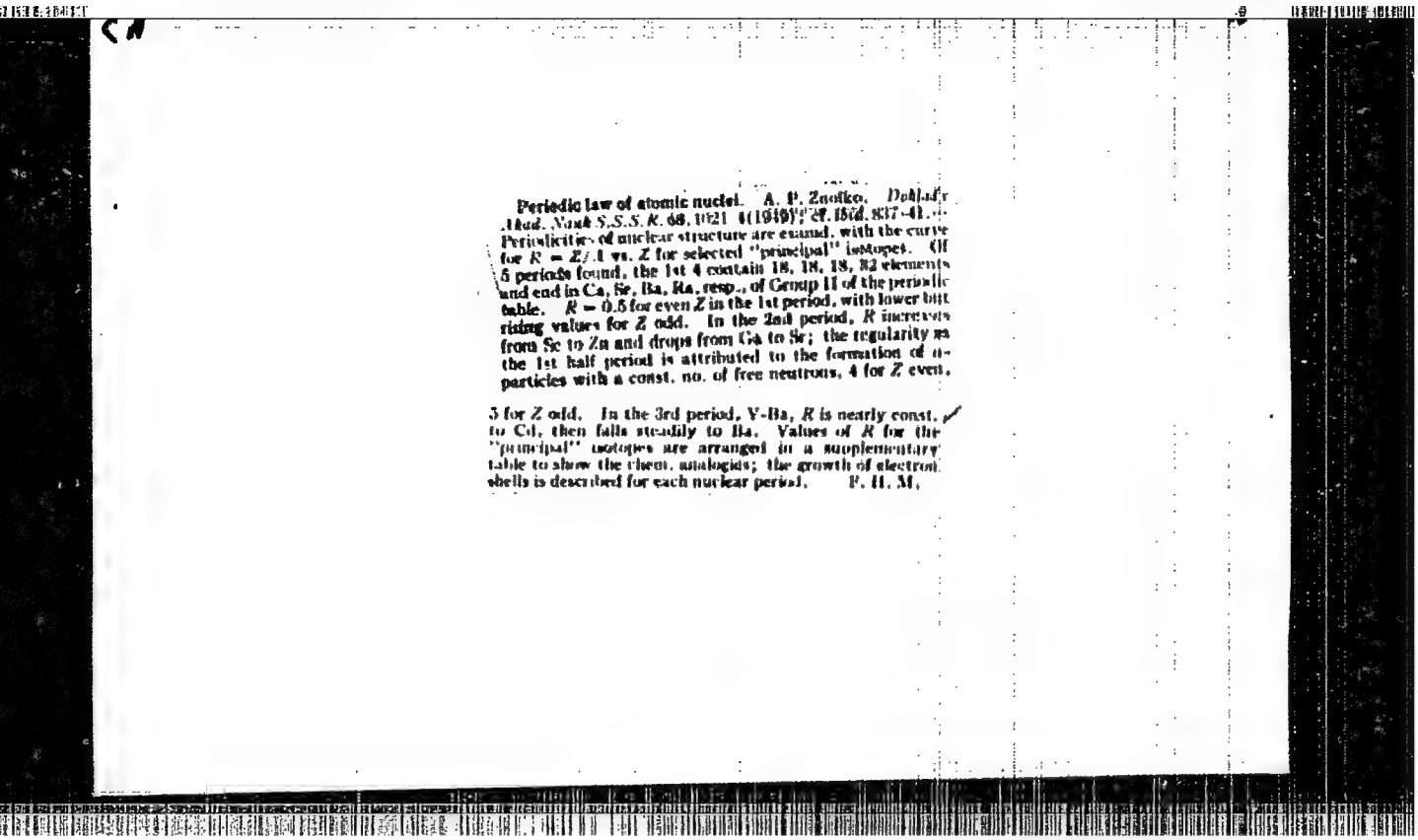
Periodic law of the atomic nuclei. Isotopes of the end of the periodic system. A. P. Znoiko. *Doklady Akad. Nauk S.S.S.R.* 60, 169-71(1948); cf. C.A. 44, 8215h.—On a coordinate system (A,Z/A) isotopes near the end of the periodic system are plotted with lines through isotopes with a const. A-2Z. From rules announced in the preceding paper, the existence of 97[illegible], 98[illegible], 99[illegible], 100[illegible] is indicated, with half-lives measured in yrs. The types of radiation and other properties can be predicted for isotopes of these atoms.

F. H. Murray

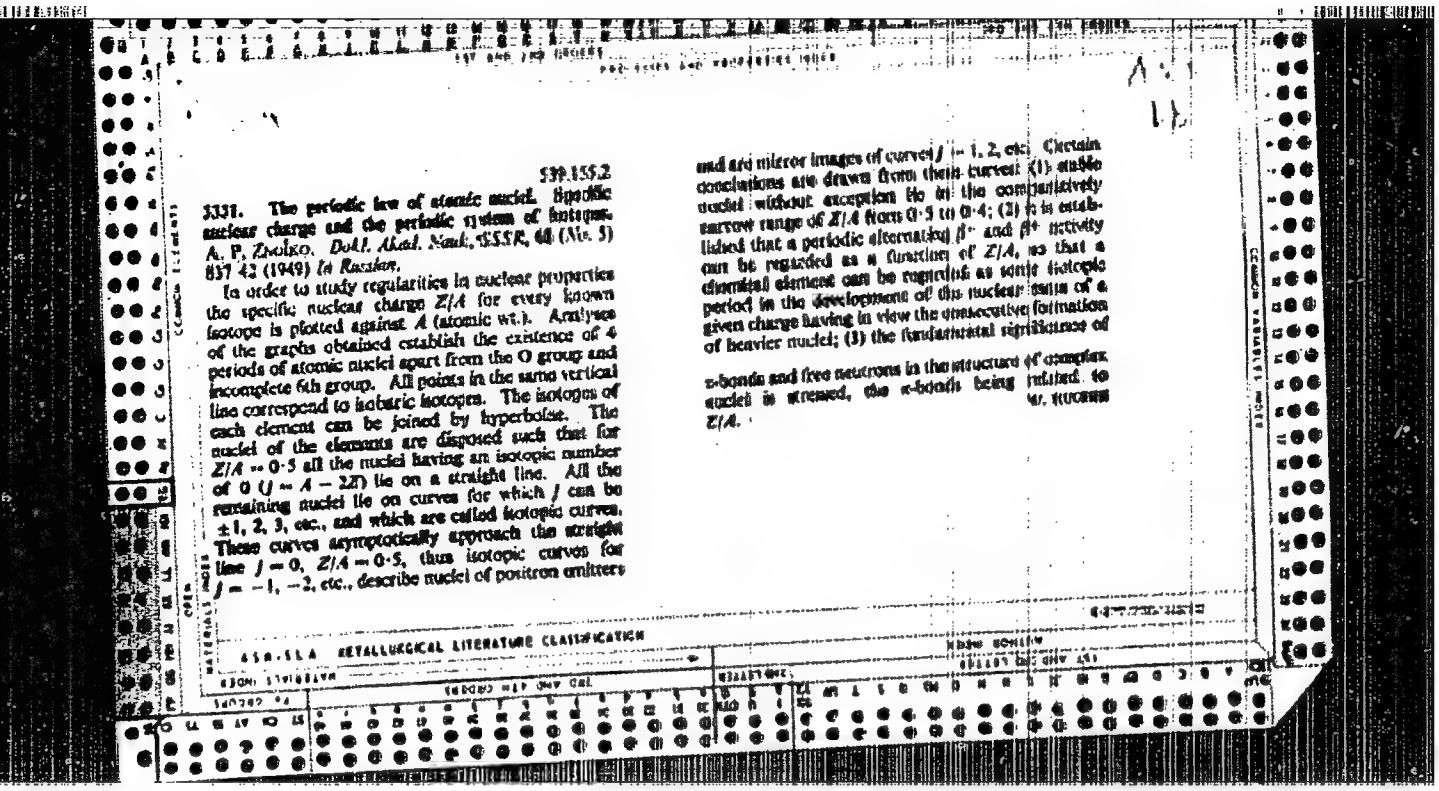
197

C.A.
1951

Periodic system of atomic nuclei. Specific charge of the nuclei and periodic law of the isotopes. A. P. Zinov'ev. *Doklady Akad. Nauk S.S.S.R.* 64, 857–41(1948); cf. C.A. 44, 8256.—Isotopes are plotted on a coordinate system (A vs. Z/A) and the curves $A - 2Z$ = const. are drawn through them. The chart indicates the periodically changing structure and stability of the nuclei, and suggests types of radiation for unknown isotopes. Stable nuclei are plotted with coordinates (Z vs. Z/A), and 4 groups of elements are indicated by a smooth curve through them: Li – K, Ca – Rb, Sr – Cs, Ba – Ra.
F. H. Murray



Periodic law of atomic nuclei. A. P. Zaotko. *Doklady Akad. Nauk S.S.S.R.* 68, 1021–4 (1949); cf. *ibid.* 837–41.—Periodicities of nuclear structure are examd. with the curve for $R = Z/A$ vs. Z for selected "principal" isotopes. Of 5 periods found, the 1st 4 contain 18, 18, 18, 32 elements and end in Ca, Sr, Ba, Ra, resp., of Group II of the periodic table. $R = 0.5$ for even Z in the 1st period, with lower but riding values for Z odd. In the 2nd period, R increases from Sc to Zn and drops from Ga to Sr; the regularity in the 1st half period is attributed to the formation of α-particles with a const. no. of free neutrons, 4 for Z even, 5 for Z odd. In the 3rd period, V–Ba, R is nearly const. to Cd, then falls steadily to Ba. Values of R for the "principal" isotopes are arranged in a supplementary table to show the chem. analogies; the growth of electron shells is described for each nuclear period. P. H. M.



539.155.2

3331. **The periodic law of atomic nuclei. Specific nuclear charge and the periodic system of isotopes.** A. P. Zhelko. *Dokl. Akad. Nauk, USSR*, 68 (No. 5) 857-62 (1949) *In Russian.*

In order to study regularities in nuclear properties the specific nuclear charge Z/A for every known isotope is plotted against A (atomic wt.). Analyses of the graphs obtained establish the existence of 4 periods of atomic nuclei apart from the O group and incomplete 6th group. All points in the same vertical line correspond to isobaric isotopes. The isotopes of each element can be joined by hyperbolae. The nuclei of the elements are disposed such that for $Z/A = 0{\cdot}5$ all the nuclei having an isotopic number of 0 ($J = A - 2Z$) lie on a straight line. All the remaining nuclei lie on curves for which J can be $\pm 1, 2, 3$, etc., and which are called isotopic curves. These curves asymptotically approach the straight line $J = 0$, $Z/A = 0{\cdot}5$, thus isotopic curves for $J = -1, -2$, etc., describe nuclei of positron emitters and are mirror images of curves $J = 1, 2$, etc. Certain conclusions are drawn from these curves: (1) stable nuclei without exception lie in the comparatively narrow range of Z/A from 0·5 to 0·4; (2) it is established that a periodic alternating β^- and β^+ activity can be regarded as a function of Z/A, so that a chemical element can be regarded as some isotopic period in the development of the nuclear mass of a given charge having in view the consecutive formation of heavier nuclei; (3) the fundamental significance of [illegible] α-bonds and free neutrons in the structure of complex nuclei is stressed, the α-bonds being related to Z/A.

PROCESSES AND PROPERTIES INDEX

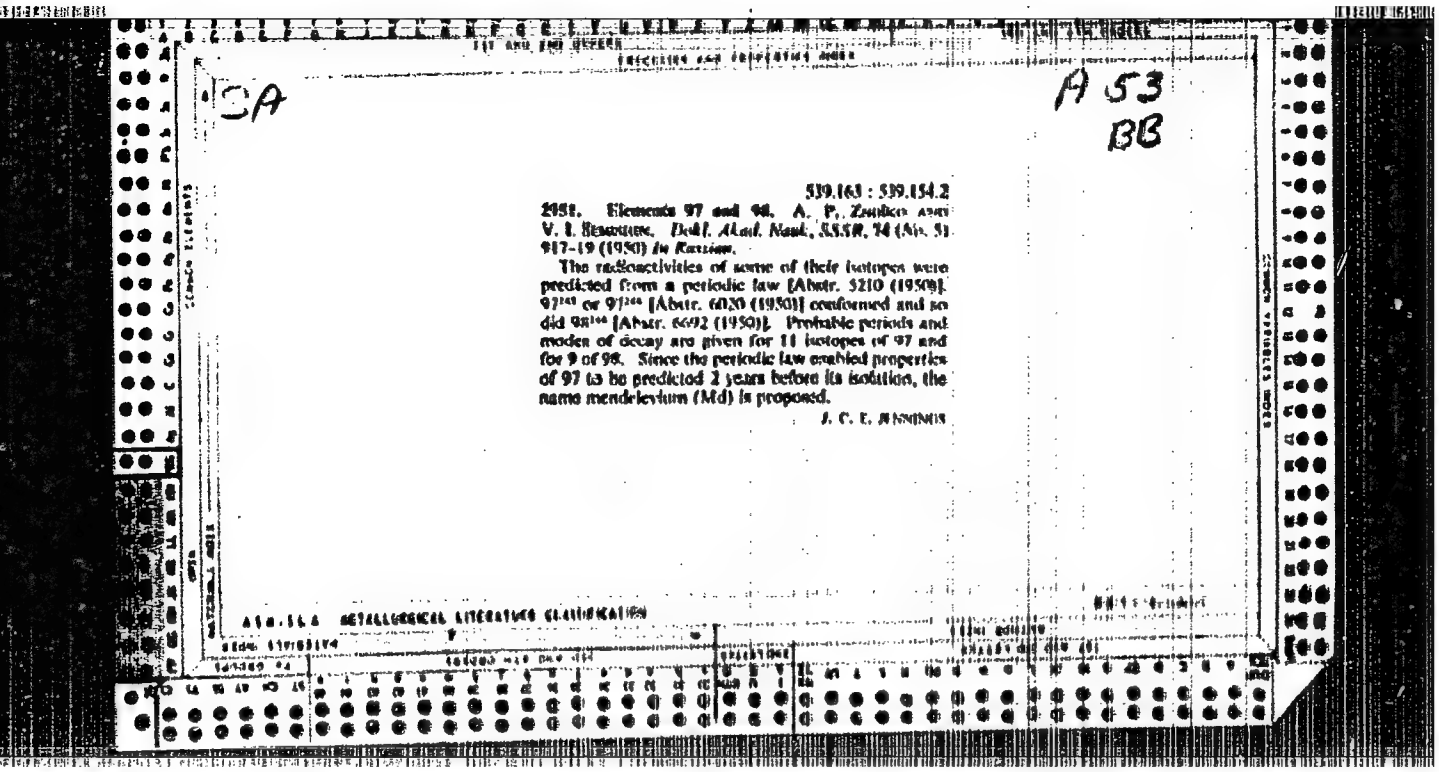
539.153.2

3332. **The periodic law of atomic nuclei. (Chemical analogues of elements in the periodic system of atomic nuclei.** A. P. Zvoljkov. *Dokl. Akad. Nauk. SSSR*, 66 (No. 6) 1021-4 (1949) *In Russian.*

[See preceding Abstr.]. When the specific nuclear charge Z/A is plotted against Z for even and odd values of Z for the primary (i.e. the most abundant), isotopes within the limits of the 4 main periods there is observed a periodic repeated rise and fall in the value of Z/A from each even to the next odd element. The graph defines the beginning and end of each type of nuclear structure and serves as a basis for forming a periodic system of elements. In the periodic table constructed the physical periods of the atomic nuclei are disposed vertically while the type of atomic nuclei is shown horizontally. Alongside the symbol for each element the isotopic number $I = (A - 2Z)$ and Z/A are given for the primary isotopes. The development of the electronic structure in the periods is considered and it is concluded that the structure of the electronic shells of the atoms is connected with the change of structure and change in Z/A of complex nuclei in the system of elements, this change in Z/A should depend not only on the amount of free neutrons but also on the mutual distribution of particles in complex nuclei.

W. HUGHES

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



CA

A 53
BB

539.163 : 539.154.2

2958. Elements 97 and 98. A. P. Zenkin and V. I. Remizov. *Dokl. Akad. Nauk, SSSR*, 74 (No. 5) 917–19 (1950) *In Russian.*

The radioactivities of some of their isotopes were predicted from a periodic law [Abstr. 5210 (1950)]. 97^{243} or 97^{244} [Abstr. 6020 (1950)] confirmed and so did 98^{244} [Abstr. 6692 (1950)]. Probable periods and modes of decay are given for 11 isotopes of 97 and for 9 of 98. Since the periodic law enabled properties of 97 to be predicted 2 years before its isolation, the name mendelevium (Md) is proposed.

J. C. E. Simmons

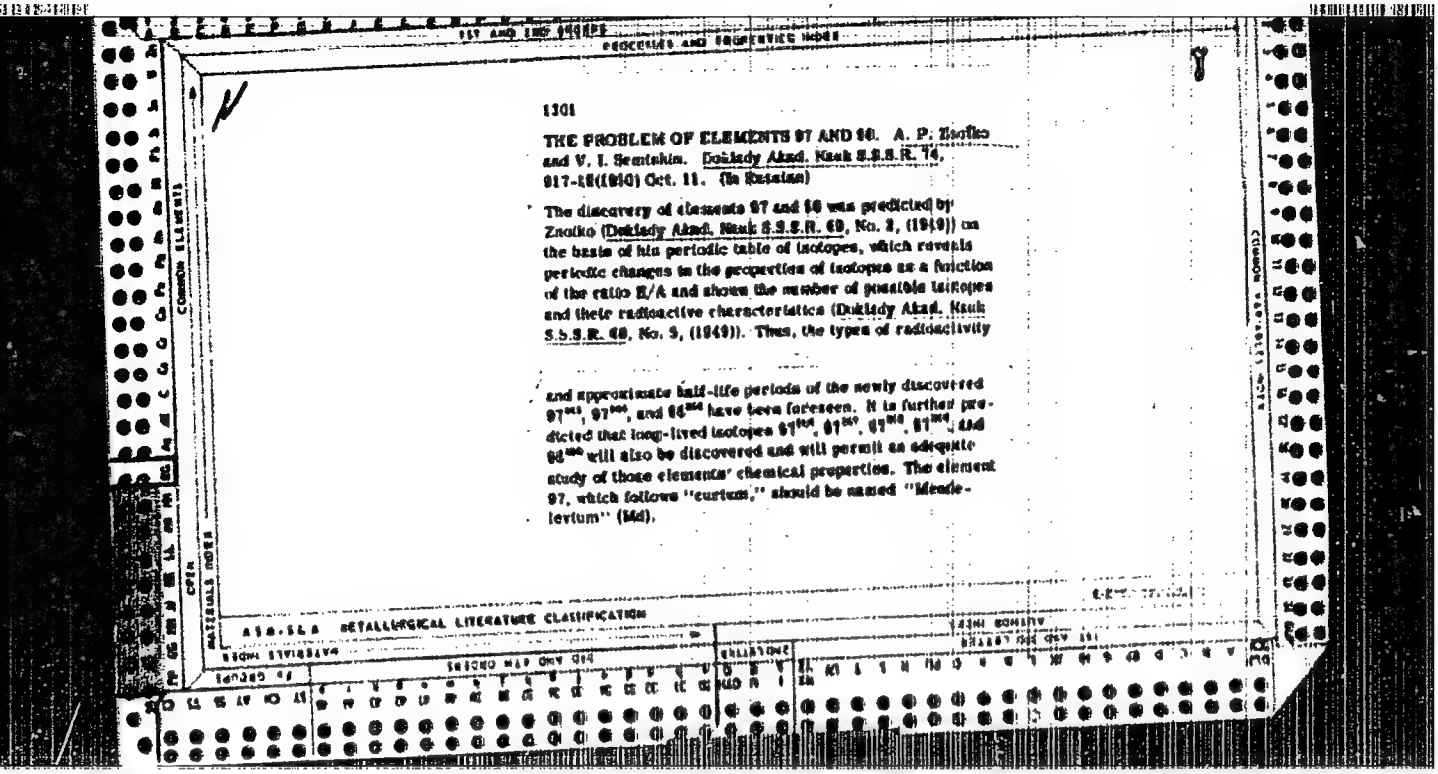
539.155.2

5210. The periodic law of atomic nuclei. The isotopes at the end of the periodic system. A. P. Zhdanov. *Dokl. Akad. Nauk, SSSR*, 68 (No. 5) 169-71 (1949) In Russian.

From the isotopic curves obtained by plotting Z/A against A [Abstr. 3331-2 (1950)] the possibility is demonstrated of forecasting nuclei of isotopes hitherto undiscovered and of estimating their ½-life period. The nuclei of 142 such isotopes are shown on the isotopic curves. Nuclei are postulated for elements 97, 98, 99, 100 with ½-life periods of the order of years, which indicates the possibility of isolating these isotopes for study. The most stable isotopes for elements 97-100 are $97^{[illegible]}$, $98^{[illegible]}$, $99^{[illegible]}$ and $100^{[illegible]}$. It is also possible to forecast the type of radiation and other properties of each nuclei. The most stable nuclei of Pu are $Pu^{[illegible]}$ and $Pu^{[illegible]}$, one of which is the "primary" nucleus. For At, Rn and Fr the most stable nuclei are not $At^{[illegible]}$, Rn^{222} and $Fr^{[illegible]}$, known at present, but $At^{[illegible]}$, $Rn^{[illegible]}$, $Fr^{[illegible]}$, which are also the "primary" isotopes of these elements.

W. HUGHES

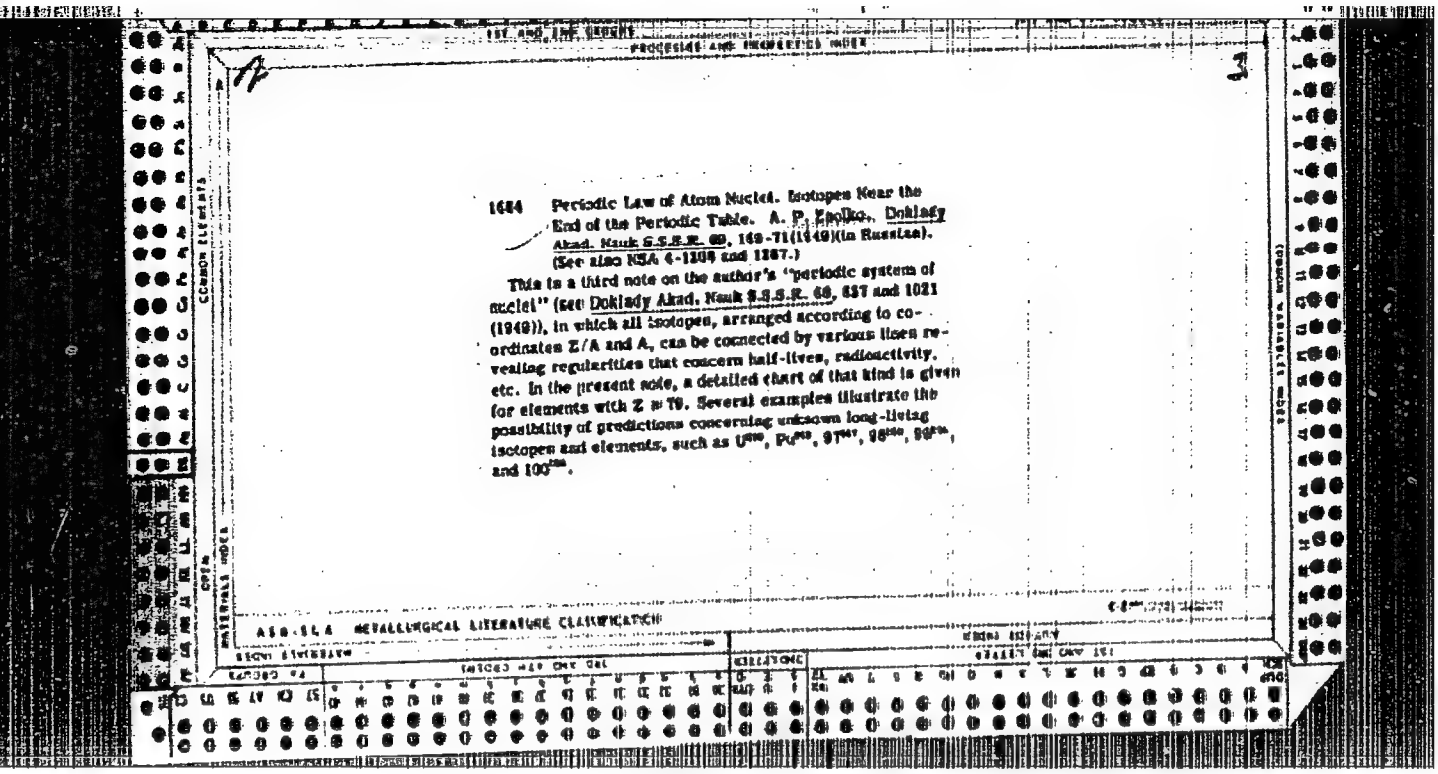
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



1301

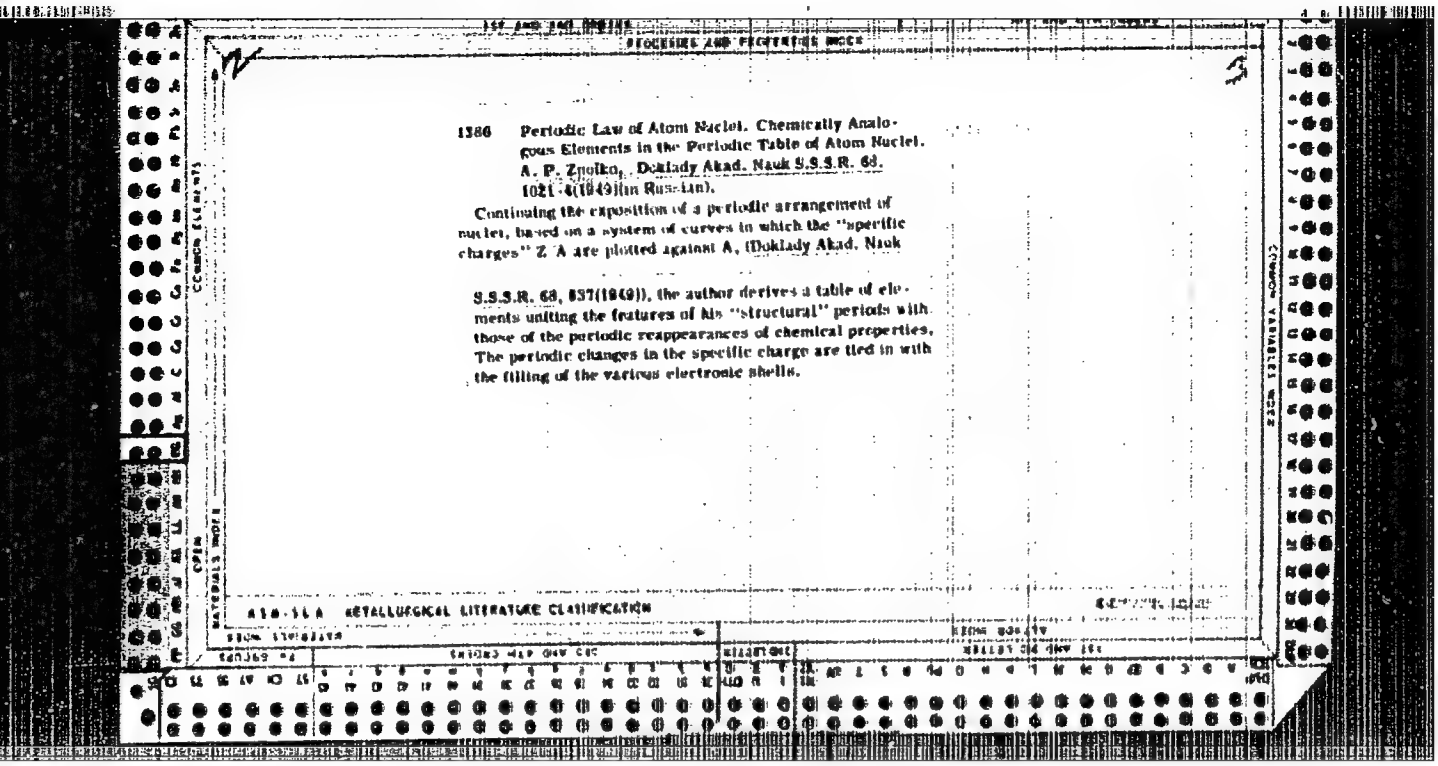
THE PROBLEM OF ELEMENTS 97 AND 98. A. P. Znoiko and V. I. Semishin. Doklady Akad. Nauk S.S.S.R. 74, 917-18((1950) Oct. 11. (In Russian)

The discovery of elements 97 and 98 was predicted by Znoiko (Doklady Akad. Nauk S.S.S.R. 69, No. 2, (1949)) on the basis of his periodic table of isotopes, which reveals periodic changes in the properties of isotopes as a function of the ratio E/A and shows the number of possible isotopes and their radioactive characteristics (Doklady Akad. Nauk S.S.S.R. 69, No. 5, (1949)). Thus, the types of radioactivity and approximate half-life periods of the newly discovered 97^{243}, 97^{244}, and 98^{244} have been foreseen. It is further predicted that long-lived isotopes 97^{245}, 97^{247}, 97^{248}, 97^{249}, and 98^{250} will also be discovered and will permit an adequate study of those elements' chemical properties. The element 97, which follows "curium," should be named "Mendelevium" (Md).



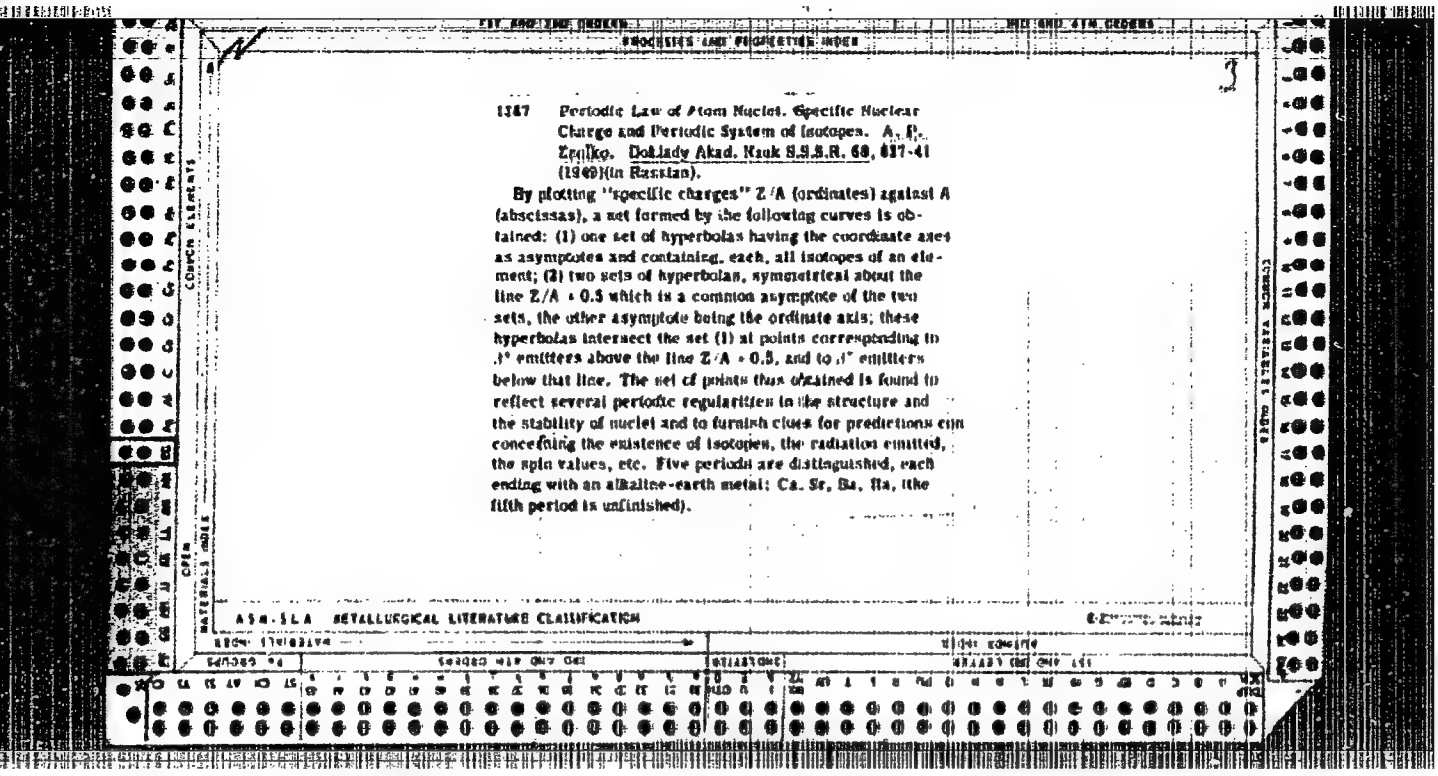
1684 Periodic Law of Atom Nuclei. Isotopes Near the End of the Periodic Table. A. P. Expiko. Doklady Akad. Nauk S.S.S.R. 69, 149-71(1949)(in Russian). (See also NSA 4-1109 and 1287.)

This is a third note on the author's "periodic system of nuclei" (see Doklady Akad. Nauk S.S.S.R. 69, 837 and 1021 (1949)), in which all isotopes, arranged according to coordinates Z/A and A, can be connected by various lines revealing regularities that concern half-lives, radioactivity, etc. In the present note, a detailed chart of that kind is given for elements with Z ≥ 79. Several examples illustrate the possibility of predictions concerning unknown long-living isotopes and elements, such as U^{240}, Pu^{242}, 97^{247}, 98^{250}, 98^{254}, and 100^{256}.



1386 Periodic Law of Atom Nuclei. Chemically Analogous Elements in the Periodic Table of Atom Nuclei. A. P. Znoiko. Doklady Akad. Nauk S.S.S.R. 68, 1021-4(1949)(in Russian).

Continuing the exposition of a periodic arrangement of nuclei, based on a system of curves in which the "specific charges" Z/A are plotted against A, (Doklady Akad. Nauk S.S.S.R. 68, 837(1949)), the author derives a table of elements uniting the features of his "structural" periods with those of the periodic reappearances of chemical properties. The periodic changes in the specific charge are tied in with the filling of the various electronic shells.



1347 Periodic Law of Atom Nuclei. Specific Nuclear Charge and Periodic System of Isotopes. A. F. Zapiko. Doklady Akad. Nauk S.S.S.R. 68, 837-41 (1949)(in Russian).

By plotting "specific charges" Z/A (ordinates) against A (abscissas), a set formed by the following curves is obtained: (1) one set of hyperbolas having the coordinate axes as asymptotes and containing, each, all isotopes of an element; (2) two sets of hyperbolas, symmetrical about the line Z/A + 0.5 which is a common asymptote of the two sets, the other asymptote being the ordinate axis; these hyperbolas intersect the set (1) at points corresponding to .1° emitters above the line Z/A + 0.5, and to .1° emitters below that line. The set of points thus obtained is found to reflect several periodic regularities in the structure and the stability of nuclei and to furnish clues for predictions concerning the existence of isotopes, the radiation emitted, the spin values, etc. Five periods are distinguished, each ending with an alkaline-earth metal: Ca, Sr, Ba, Ra, (the fifth period is unfinished).

500. THE DETERMINATION OF SPEECH INTELLIGIBILITY IN [illegible] WITH [illegible] FREQUENCY [illegible] (in connection with Secret Systems).—[illegible]kov. (*Izvestiya Elektroprom. Slab. Toka*, No. 12, 1940, pp. 12 [illegible].)

Modern conceptions regarding the effect on speech articulation of the width of the frequency band transmitted are reviewed, and methods are indicated for determining articulation for narrow frequency bands. The results obtained are applied to the case of scrambler secrecy equipment, and the minimum number of the frequency bands is determined, into which the main band should be split up to ensure that speech will remain unintelligible [illegible] on any one of these bands if these [illegible] up [illegible] [illegible] [illegible].

[illegible] information is yet available on the [illegible] ship [illegible] [illegible] [illegible] of [illegible] [illegible] in the [illegible] language [illegible] discussion [illegible] based on [illegible] experiments with the English [illegible] [illegible] expected that this will [illegible] [illegible] [illegible] [illegible] some reached.

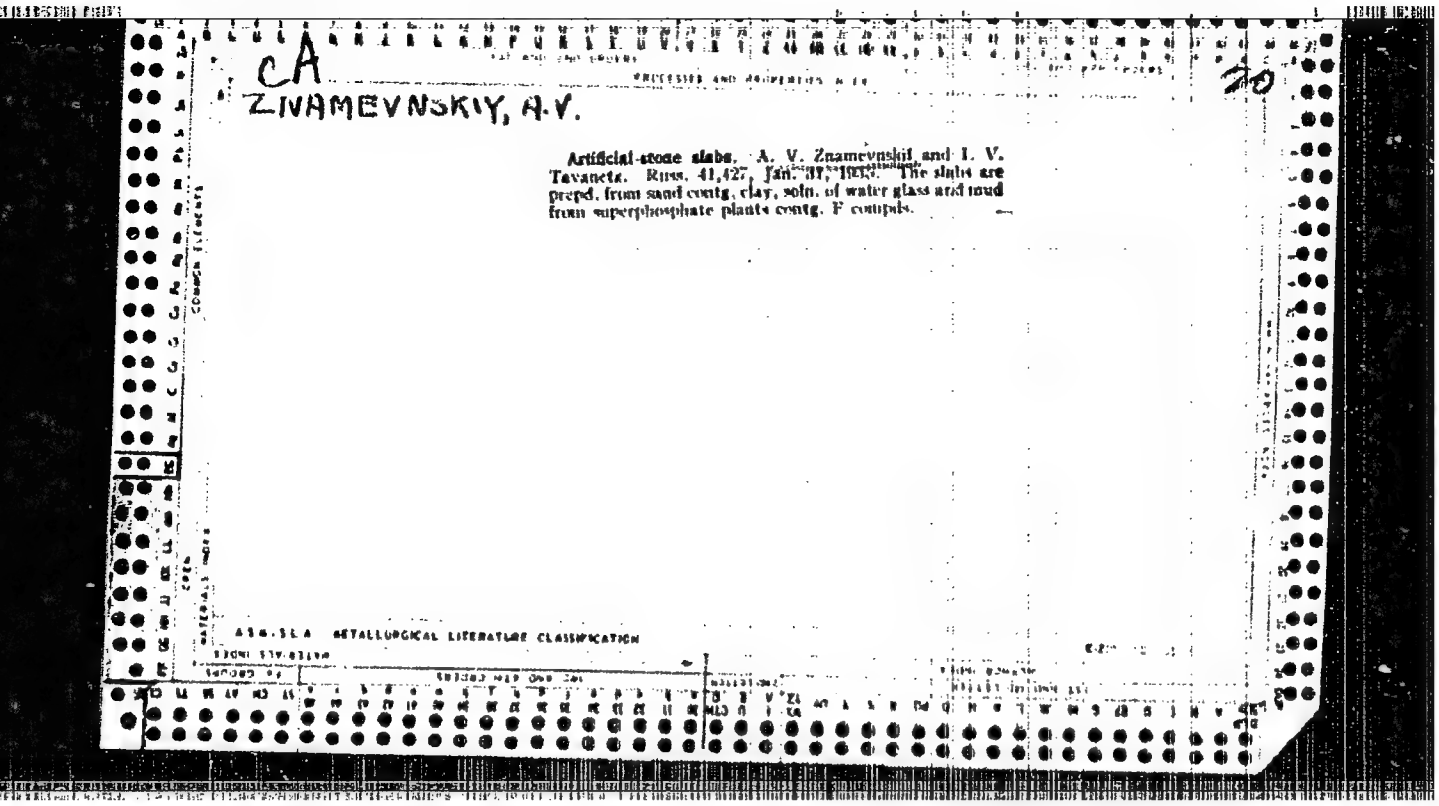
PROCESSES AND PROPERTIES INDEX

BC

B-I-3

Dielectric constants of petroleum and its products. V. Zhuze (Azerbaid. Neft. Khoz., 1930, No. 12, 88—98).—The dielectric const. of petroleum and paraffins increase with increase in d, b.p., and mol. wt., and are approx. equal to n_D^2. For petroleum the temp. coeff. is negative. The dielectric const. of naphthenic acids increase with increase in d, b.p., surface tension, m.p. and mol. wt. CHEMICAL ABSTRACTS.

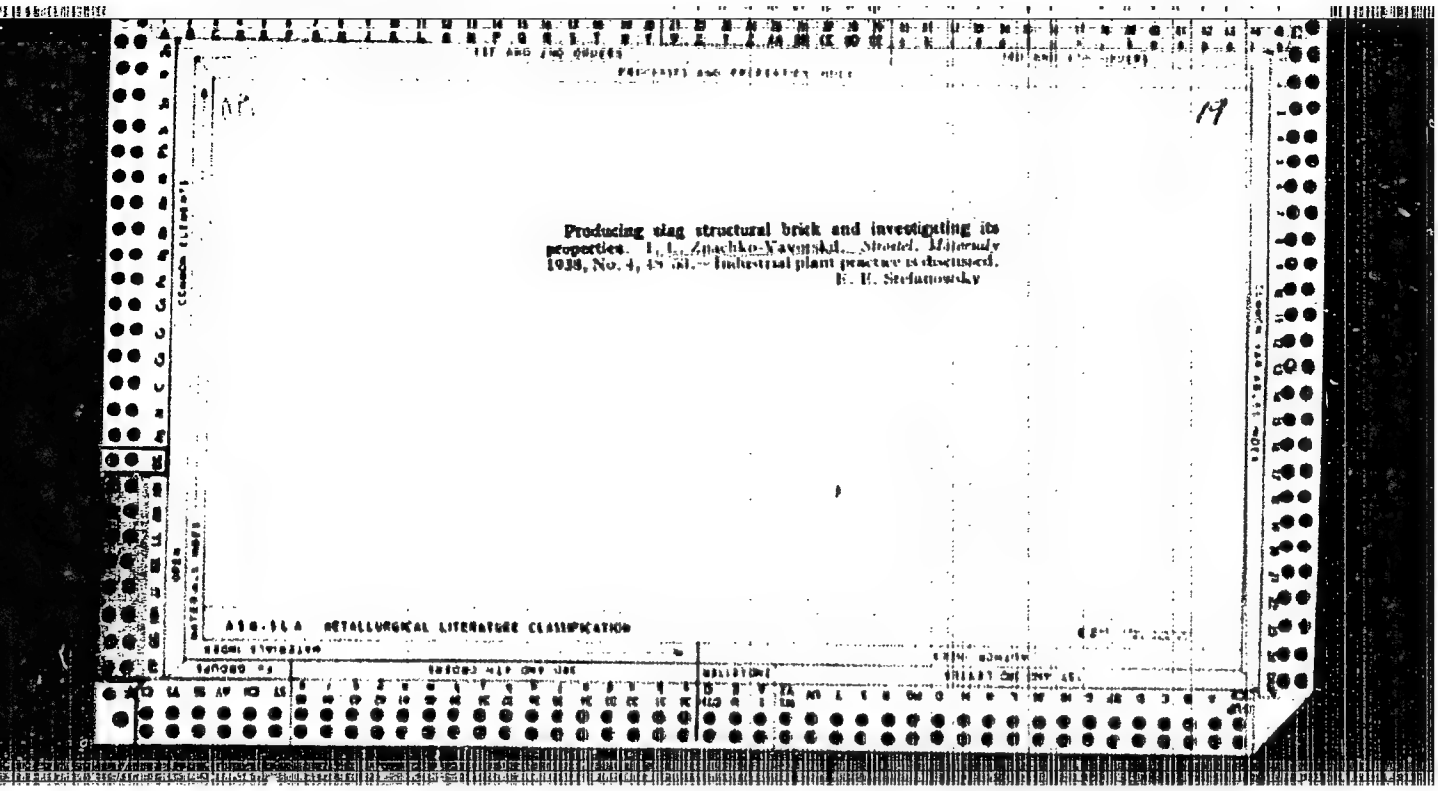
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



CA

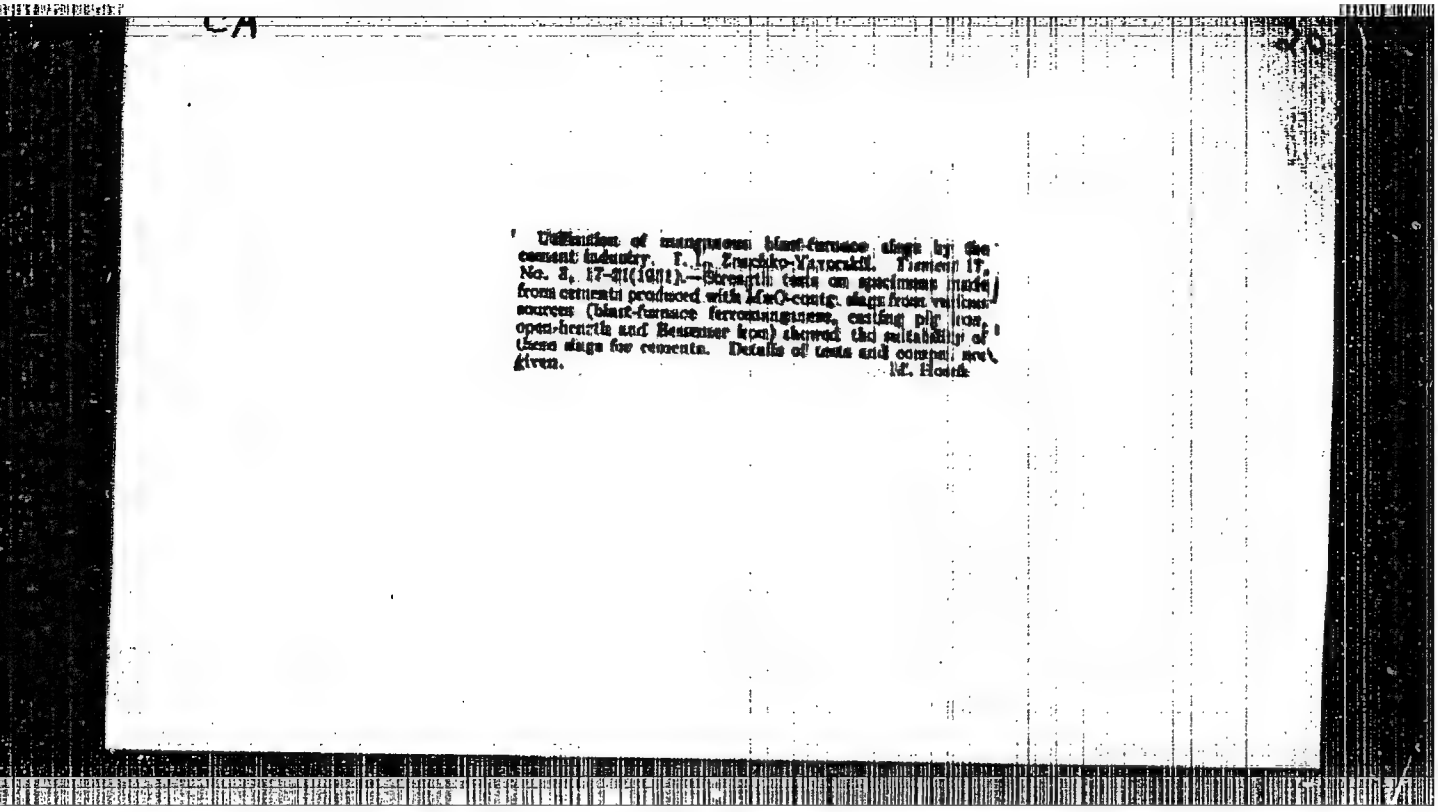
ZNAMENSKIY, A.V.

Artificial-stone slabs. A. V. Znamenskiĭ and I. V. Tavanets. Russ. 41,427, Jan. 31, 1935. The slabs are prepd. from sand contg. clay, soln. of water glass and mud from superphosphate plants contg. F compds.



Producing slag structural brick and investigating its properties. I. I. Zinchko-Yavorskii. *Stroitel. Materialy* 1938, No. 4, 45 pp.—Industrial plant practice is discussed.
B. B. Stefanowsky

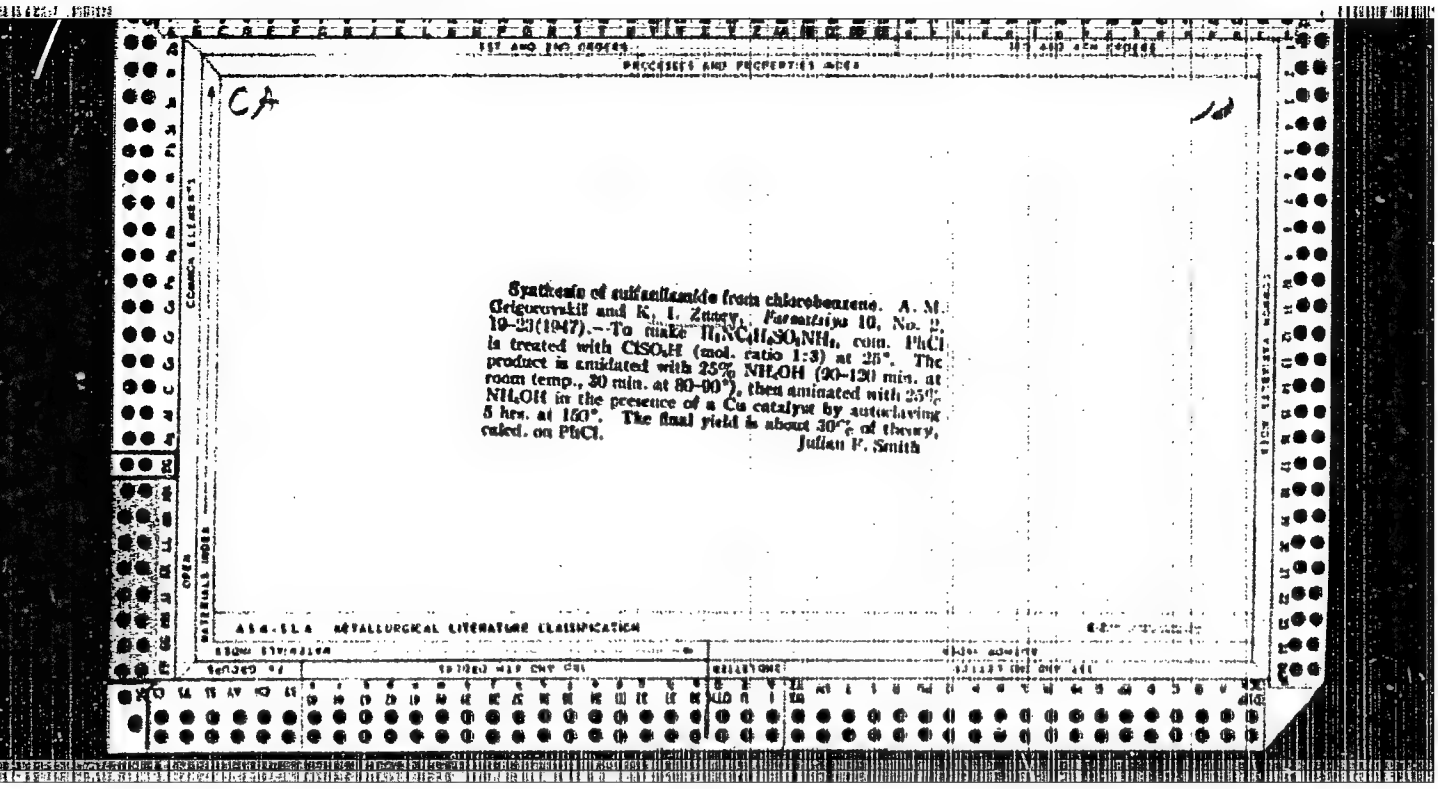
A38-51A METALLURGICAL LITERATURE CLASSIFICATION



CA

Utilization of manganous blast-furnace slags by the cement industry. I. N. Zaychko-Yavorskii. Tsement 17, No. 3, 17-21(1951).—Strength tests on specimens made from cements produced with MnO-contg. slags from various sources (blast-furnace ferromanganese, casting pig iron, open-hearth and Bessemer iron) showed the suitability of these slags for cements. Details of tests and compns. are given.

M. Hosch



CA

Synthesis of sulfanilamide from chlorobenzene. A. M. Grigorovskii and K. I. Zinov'ev. *Farmatsiya* 10, No. 2, 19–23(1947).—To make $H_2NC_6H_4SO_2NH_2$, com. PhCl is treated with $ClSO_3H$ (mol. ratio 1:3) at 25°. The product is amidated with 25% NH_4OH (90–120 min. at room temp., 30 min. at 80–90°), then aminated with 25% NH_4OH in the presence of a Cu catalyst by autoclaving 5 hrs. at 150°. The final yield is about 30% of theory, calcd. on PhCl.

Julian P. Smith

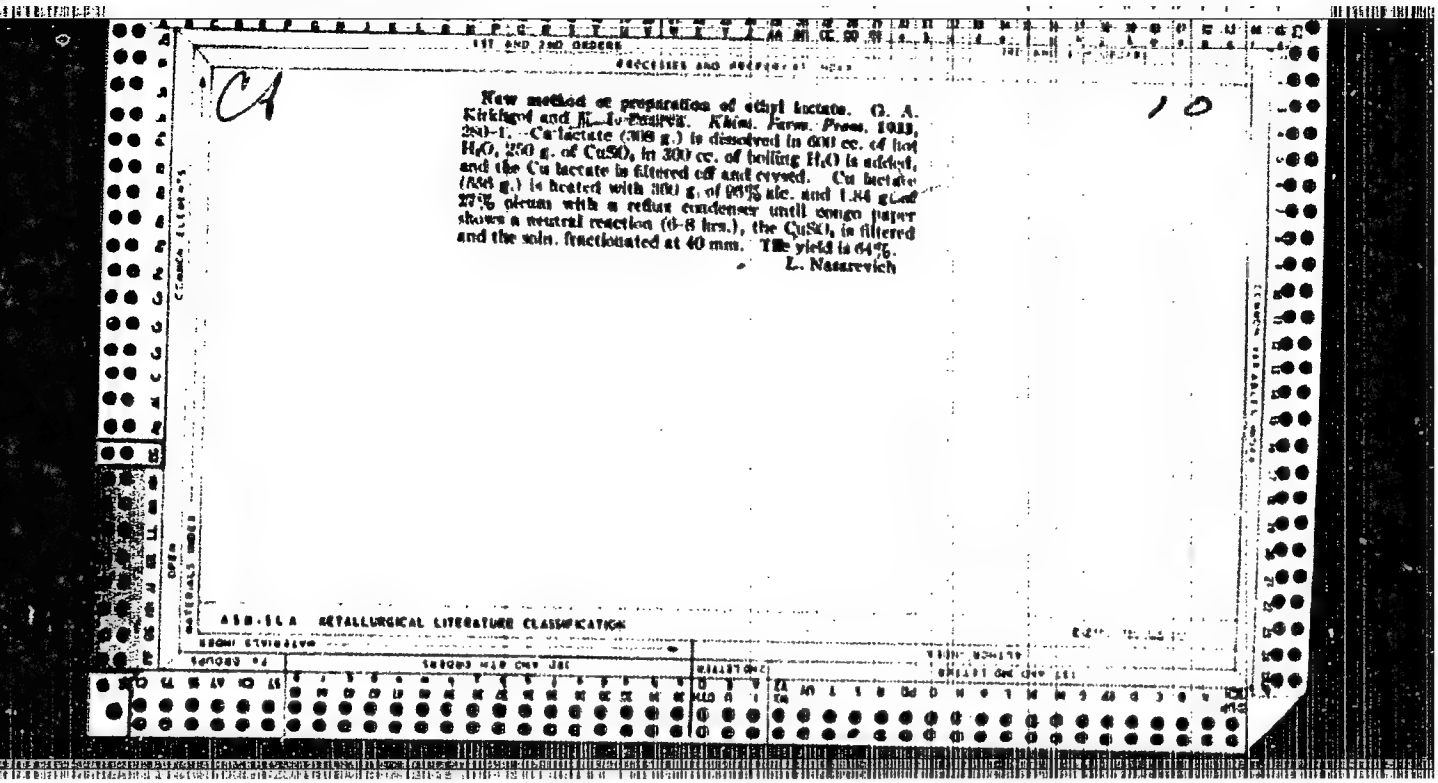
PROCESSES AND PROPERTIES INDEX

B2

A-3

Preparation of ethyl lactate. G. A. Kirkhgof and K. I. Z[illegible] (Khim. Farm. Prom., 1933, 230–231).—Ca lactate (808 g.) is dissolved in hot H_2O (600 c.c.); $CuSO_4$ (300 g.) in boiling H_2O (300 c.c.) is added, and the Cu lactate (I) collected and crystallised. (I) (618 g.) is heated with 96% EtOH (580 g.) and 87% oleum (1·64 g.) for 6–8 hr., the $CuSO_4$ filtered off, and the solution fractionated at 40 mm. Yield 64%. Ch. Abs.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



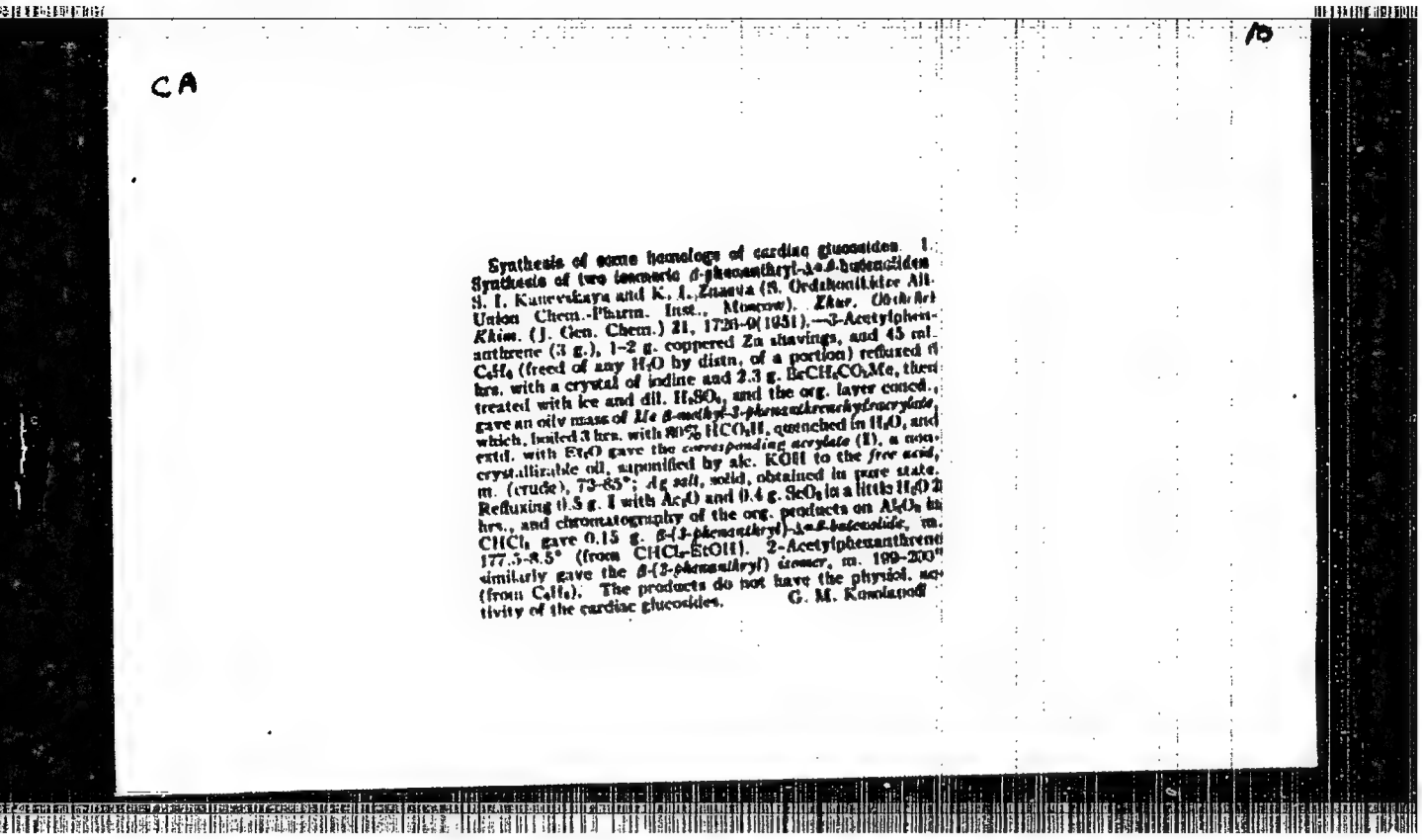
C1

10

New method of preparation of ethyl lactate. G. A. Kirkland and R. L. Peters. *Chim. Farm. Prom.* 1933, 280–1.—Ca lactate (308 g.) is dissolved in 600 cc. of hot H_2O, 250 g. of $CuSO_4$ in 300 cc. of boiling H_2O is added, and the Cu lactate is filtered off and rinsed. Cu lactate (856 g.) is heated with 300 g. of 95% alc. and 1.84 g. of 27% oleum with a reflux condenser until congo paper shows a neutral reaction (6–8 hrs.), the $CuSO_4$ is filtered and the soln. fractionated at 40 mm. The yield is 64%.

L. Nasarevich

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION



CA

Synthesis of some homologs of cardiac glucosides. I. Synthesis of two isomeric β-phenanthryl-Δα,β-butenolides. S. I. Kanevskaya and K. I. Zhanova (S. Ordzhonikidze All-Union Chem.-Pharm. Inst., Moscow). *Zhur. Obshchei Khim.* (J. Gen. Chem.) 21, 1726-9(1951).—3-Acetylphenanthrene (3 g.), 1-2 g. coppered Zn shavings, and 45 ml. C_6H_6 (freed of any H_2O by distn. of a portion) refluxed 6 hrs. with a crystal of iodine and 2.3 g. $BrCH_2CO_2Me$, then treated with ice and dil. H_2SO_4, and the org. layer concd. gave an oily mass of *Me β-methyl-3-phenanthrenehydroacrylate*, which, boiled 3 hrs. with 80% HCO_2H, quenched in H_2O, and extd. with Et_2O gave the *corresponding acrylate* (I), a noncrystallizable oil, saponified by alc. KOH to the *free acid*, m. (crude), 73-85°; *Ag salt*, solid, obtained in pure state. Refluxing 0.5 g. I with Ac_2O and 0.4 g. SeO_2 in a little H_2O 2 hrs., and chromatography of the org. products on Al_2O_3 in $CHCl_3$ gave 0.15 g. *β-(3-phenanthryl)-Δα,β-butenolide*, m. 177.5-8.5° (from $CHCl_3$-EtOH). 2-Acetylphenanthrene similarly gave the *β-(2-phenanthryl) isomer*, m. 199-200° (from C_6H_6). The products do not have the physiol. activity of the cardiac glucosides.

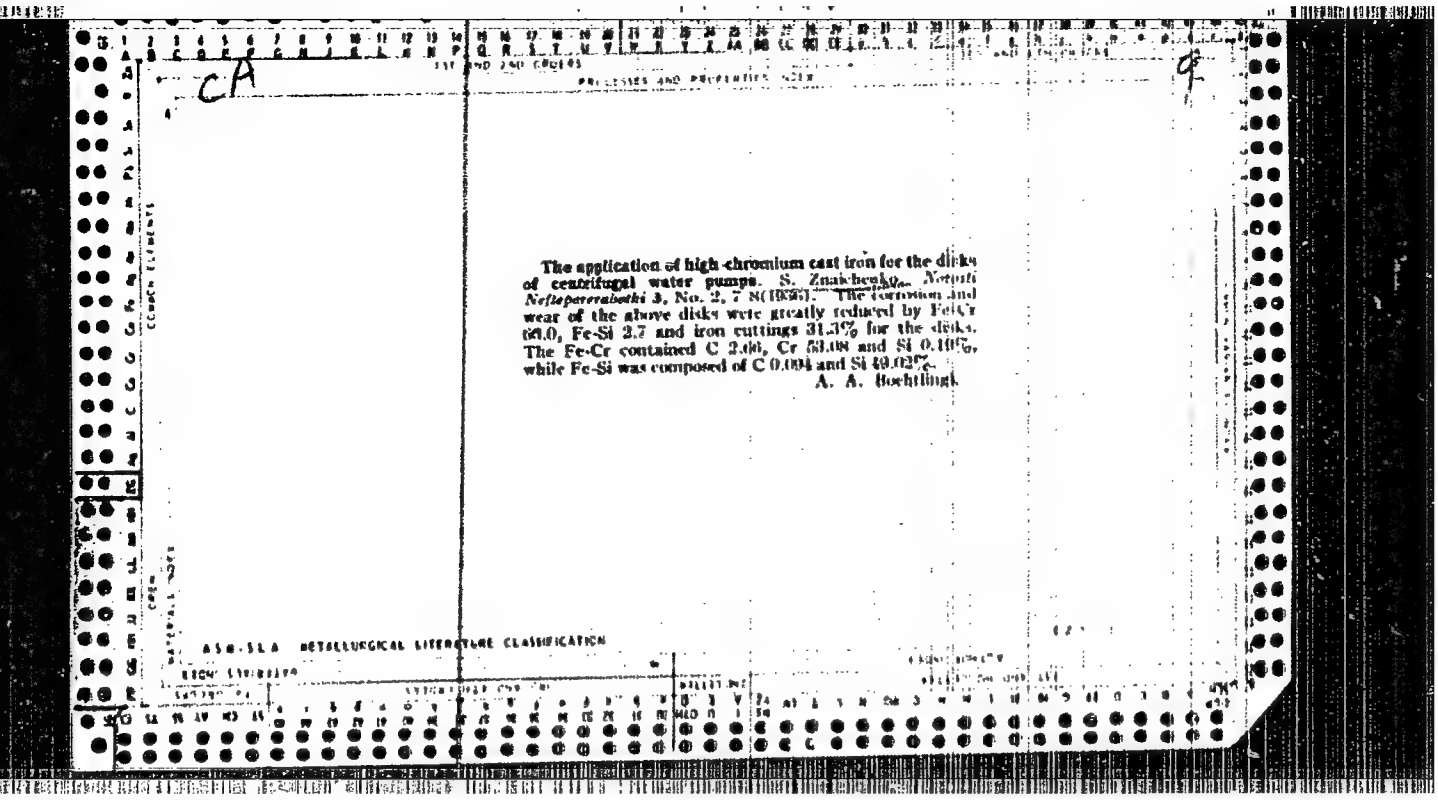
G. M. Kosolapoff

ch

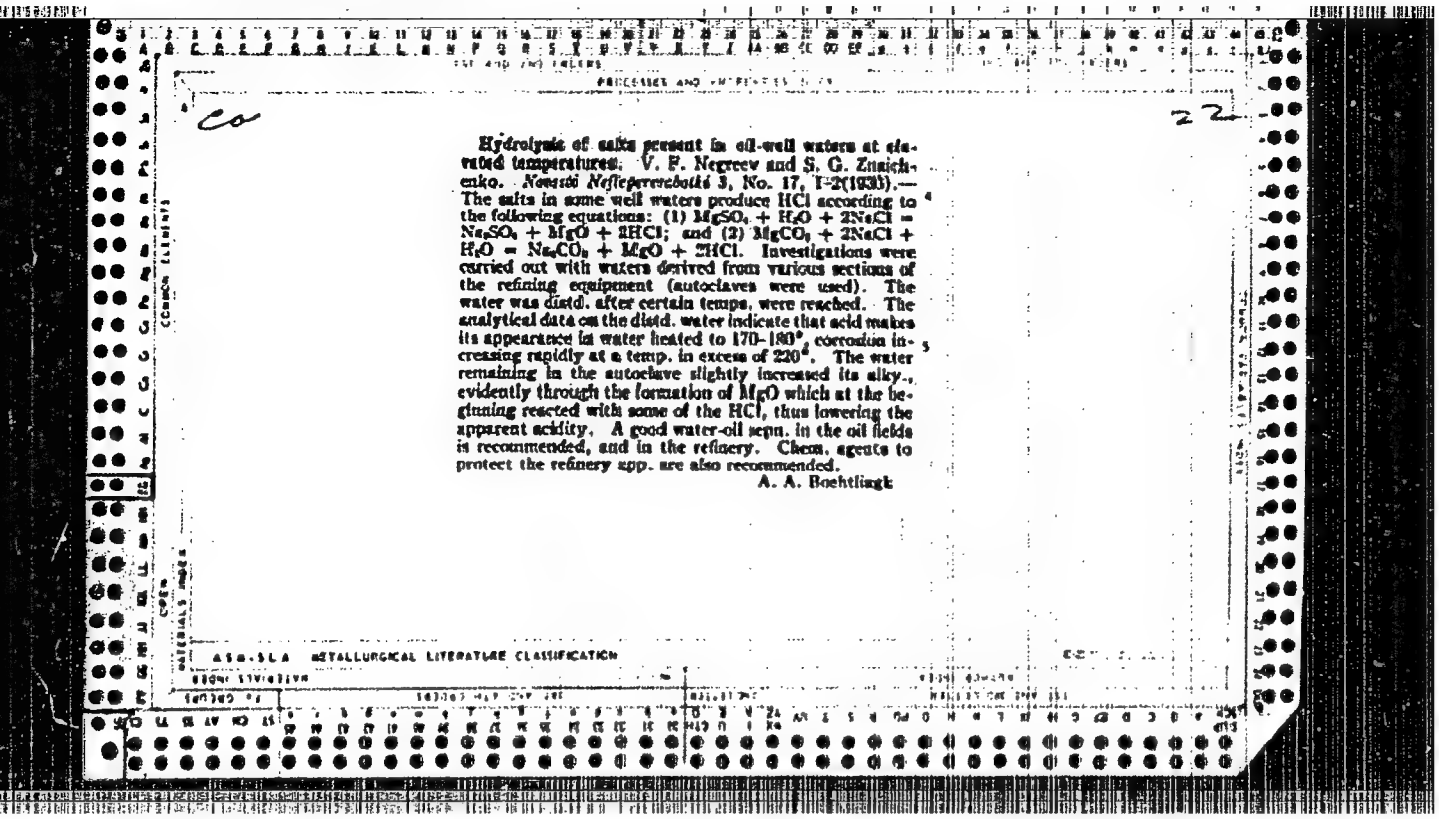
PROCESSES AND PROPERTIES INDEX

Influence of sulfuric acid on the qualities of electrically welded spots in overhauling sulfuric acid equipment. S. Znaichenko and V. Timofeev. *Novosti Neftepererabotki* 3, No. 6, 4-5(1936).—Iron plates were given the following treatment before elec. welding: (1) original material, without any treatment, (2) metal covered with acid, without treatment, (3) the same, washed with water and (4) the same, but neutralized with NaOH and washed with water. Mech. tests carried out with all welded plates gave the best results with samples (1) and (4), thus indicating that metal which was previously in contact with acid must first be neutralized and washed with water before welding was attempted. A. A. Boehtlingk

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

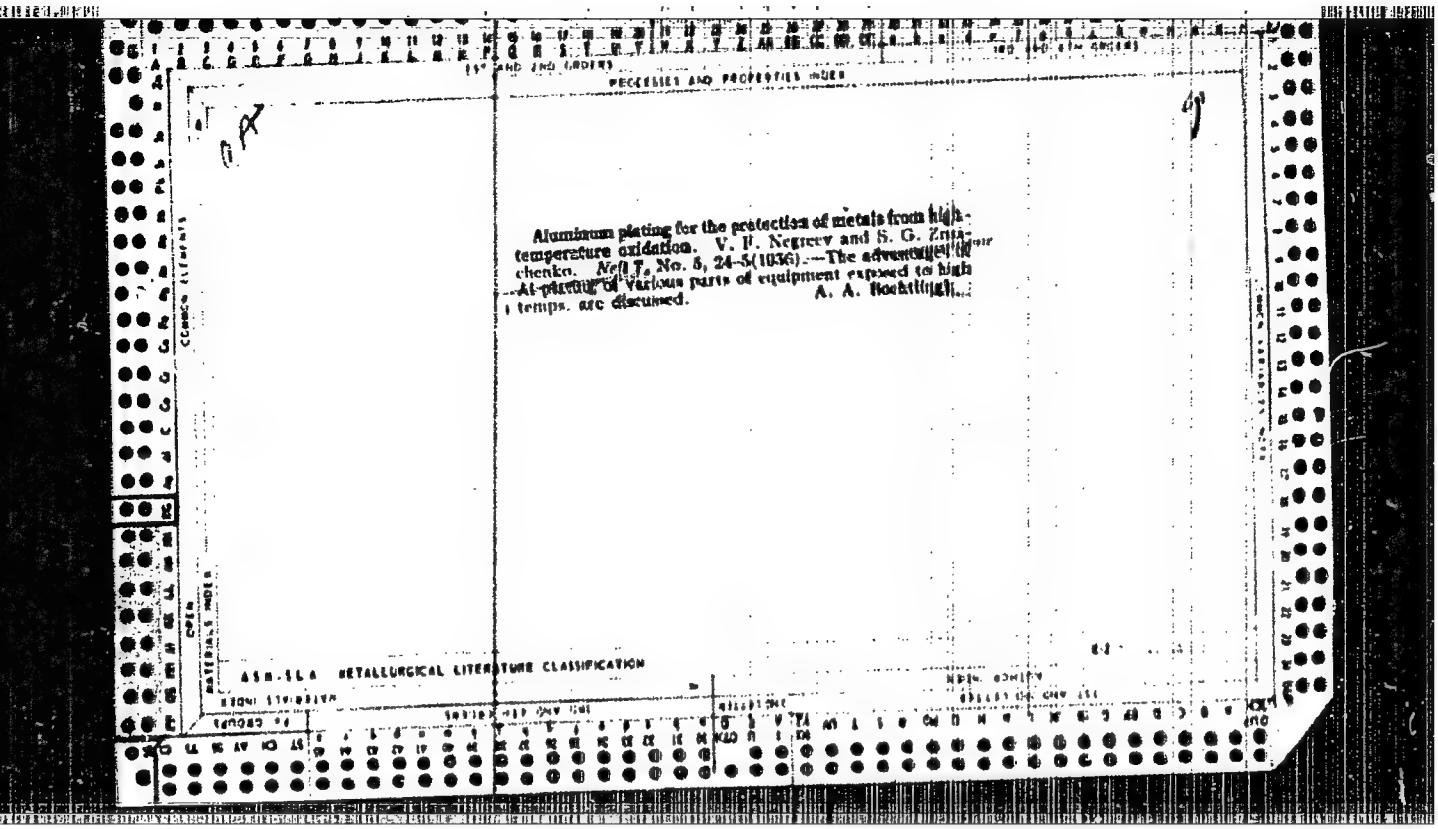


The application of high-chromium cast iron for the disks of centrifugal water pumps. S. Znaichenko. *Neftyanoe Neftepererabotki* 3, No. 2, 7 8(1935). The corrosion and wear of the above disks were greatly reduced by Fe-Cr 60.0, Fe-Si 2.7 and iron cuttings 31.3% for the disks. The Fe-Cr contained C 2.06, Cr 59.08 and Si 0.10%, while Fe-Si was composed of C 0.094 and Si 49.02%.
A. A. Boehtlingk



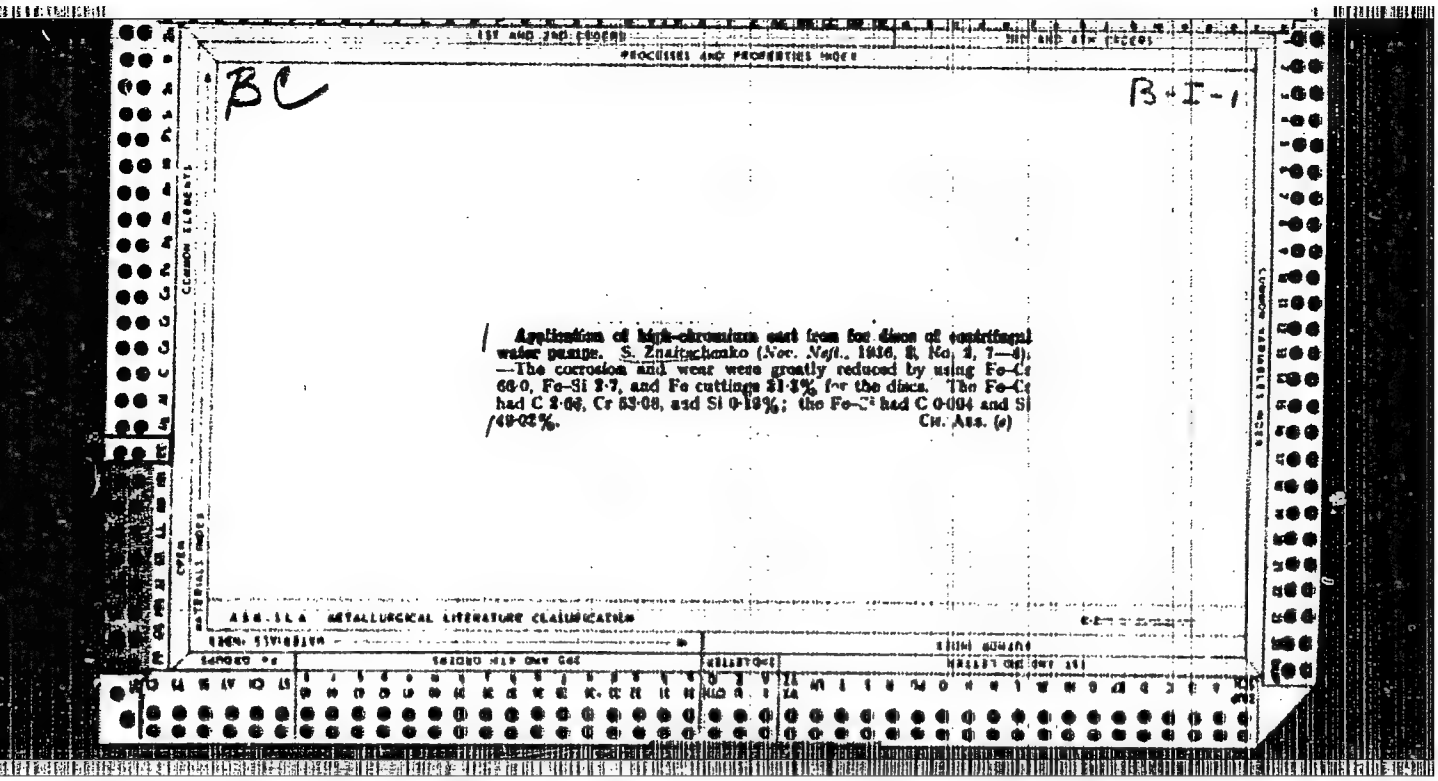
Hydrolysis of salts present in oil-well waters at elevated temperatures. V. P. Negreev and S. G. Zinich-enko. *Neftyanoe Neftegazovoe Delo* 3, No. 17, 1-2(1935).— The salts in some well waters produce HCl according to the following equations: (1) $MgSO_4 + H_2O + 2NaCl = Na_2SO_4 + MgO + 2HCl$; and (2) $MgCO_3 + 2NaCl + H_2O = Na_2CO_3 + MgO + 2HCl$. Investigations were carried out with waters derived from various sections of the refining equipment (autoclaves were used). The water was distd. after certain temps. were reached. The analytical data on the distd. water indicate that acid makes its appearance in water heated to 170–180°, corrosion increasing rapidly at a temp. in excess of 220°. The water remaining in the autoclave slightly increased its alky., evidently through the formation of MgO which at the beginning reacted with some of the HCl, thus lowering the apparent acidity. A good water-oil sepn. in the oil fields is recommended, and in the refinery. Chem. agents to protect the refinery app. are also recommended.

A. A. Boehtlingk



Aluminum plating for the protection of metals from high-temperature oxidation. V. P. Negreev and S. G. Zuta-chenko. *Neft. T.*, No. 5, 24-5(1936).—The advantages of Al-plating of various parts of equipment exposed to high temps. are discussed. A. A. Boettlingk...

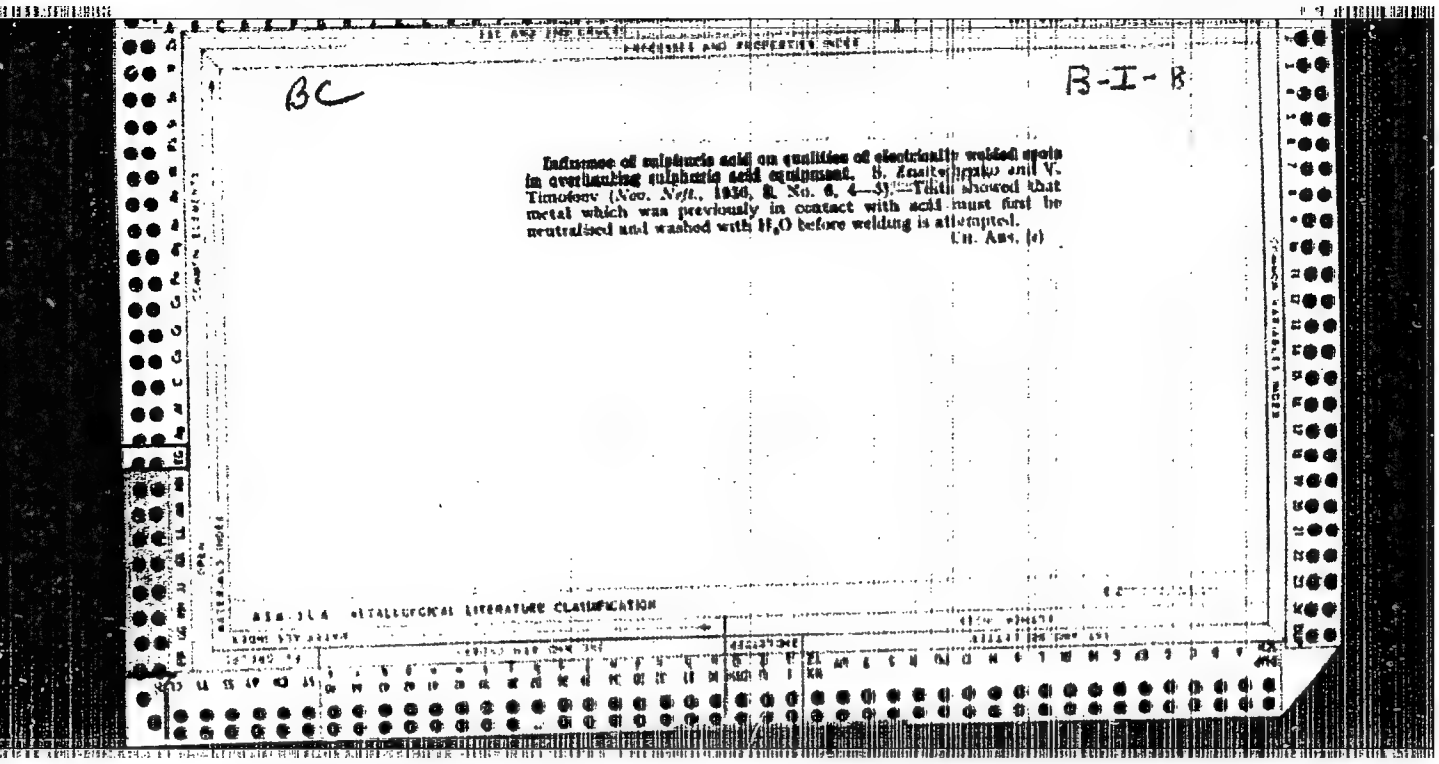
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



BC

B-I-1

Application of high-chromium cast iron for discs of centrifugal water pumps. S. Znaitchenko (*Nov. Nafte.*, 1936, 5, No. 1, 7—8). —The corrosion and wear were greatly reduced by using Fe-Cr 66·0, Fe-Si 2·7, and Fe cuttings 31·3% for the discs. The Fe-Cr had C 2·06, Cr 63·08, and Si 0·19%; the Fe-Cr had C 0·094 and Si /49·02%. Ch. Abs. (e)



BC

B-I-B

Influence of sulphuric acid on qualities of electrically welded spots in overflushing sulphuric acid equipment. B. Zaitsev (Zaitsev) and V. Timofeev (*Neo. Neft.*, 1936, 8, No. 6, 4—5).—Tests showed that metal which was previously in contact with acid must first be neutralised and washed with H_2O before welding is attempted.

Ch. Abs. (e)

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Wind Erosion and the Relief of Sand Deserts, Thesis for degree of Cand. Geographical Sci. Sub 15 April 49, Inst of Geography, Acad Sci USSR.

Summary 82, 18 Dec 52, Dissertations Presented for Degrees in Science and Engineering in Moscow in 1949. From Vechernyaya Moskva, Jan-Dec 1949.

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V. A. MASLOVSKII, Caoutchouc and Rubber 1938, No.4, 76-82

CA

11A

The significance of the six ash elements in the life activities of plants. I. A. Znamenskaya. *Botan Zhur.* 26, 330-42(1939); *Herbage Abstracts* 11, 100-1; 80(1941). —An attempt to coordinate the data which have been published during the past decade on the participation of K, Ca, Mg, Fe, S and P in the biol. functions of higher plants. S. Soloveichik

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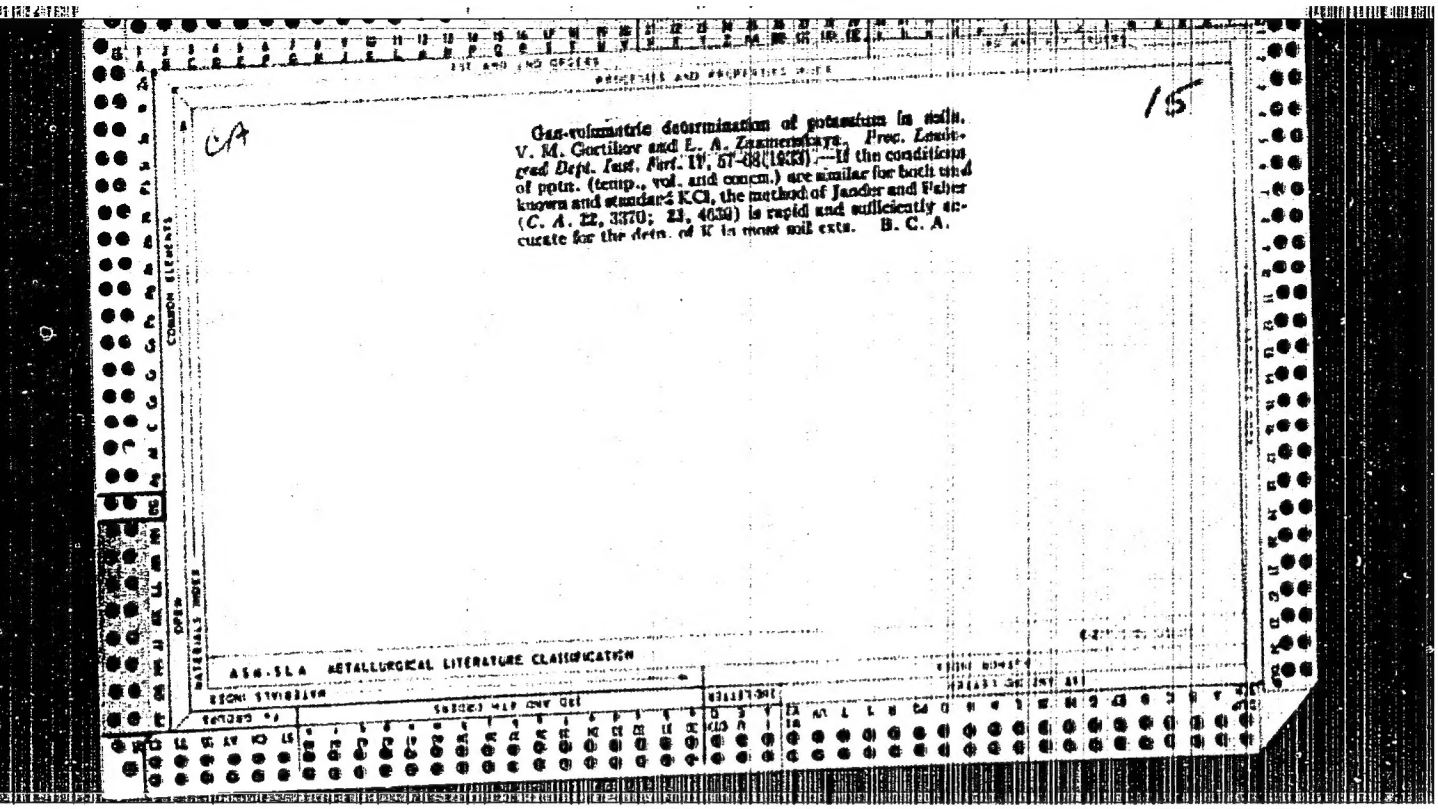
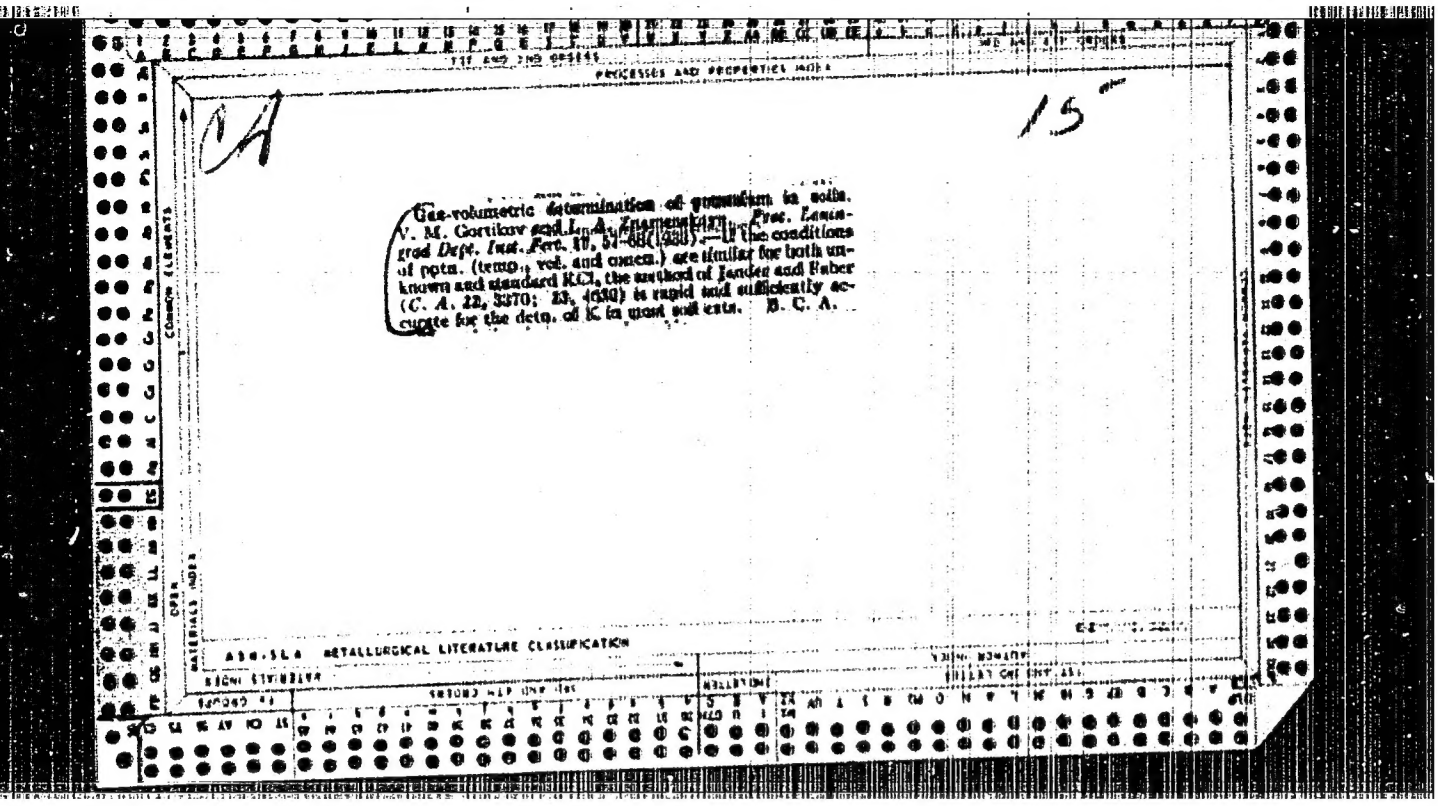


CA

15

Gas-volumetric determination of potassium in soils. V. M. Goriliev and L. A. Zazmenskaya. *Proc. Leningrad Dept. Inst. Fert.* 11, 57-68 (1933).—If the conditions of potn. (temp., vol. and concn.) are similar for both unknown and standard KCl, the method of Jander and Fisher (*C. A.* 22, 3370; 23, 4639) is rapid and sufficiently accurate for the detn. of K in most soil exts. B. C. A.



CA

15

Gas-volumetric determination of germanium in soils. V. M. Gortikov and L. A. Znamenskaya. *Proc. Leningrad Dept. Inst. Fert.* 11, 57-68 (1938).—If the conditions of pptn. (temp., vol. and concn.) are similar for both unknown and standard KCl, the method of Jander and Faber (*C. A.* 22, 3270; 23, 4630) is rapid and sufficiently accurate for the detn. of K in most soil exts. B. C. A.